JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

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AGRIGENTUM, TEMPLE OF CONCORD
View of interior, showing repair works in progress

JOURNAL OF THE

ROYAL INSTITUTE *of* BRITISH ARCHITECTS

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Journal

The Council has decided to forward the name of Willem Marinus Dudok of Holland to His Majesty the King as a suitable recipient of the Royal Gold Medal for 1935. It is the custom to award this medal every third year to some distinguished foreign architect or man of science or letters whose work has promoted the advance of architecture. M. Dudok is the third of his compatriots to be so honoured; the last award being also to a Dutchman, the venerable Dr. H. P. Berlage, who died in the summer of 1934. That two foreign awards should be made to Dutch architects in succession adds significance to both tributes. The architecture of Holland has always been a source book into which English architects have dipped. Ever since our knowledge of good bricks came to us across the sea we have been ready to learn from Dutchmen, but never more than to-day. The importance of the contributions made by M. Dudok and his compatriots to English architecture show not merely that Englishmen, as always, have been ready to learn from abroad but that in architecture as in much else Holland and England think and act alike.

On Monday, 11 February, at 3 p.m., Sir Frederick Kenyon, formerly Director and Chief Librarian of the British Museum, will open an exhibition of books and drawings from the R.I.B.A. Library, which is to be held in the Institute Exhibition rooms until 6 March. The Library has had to wait 100 years for this opportunity to display the treasures which it has accumulated by gift and purchase from the first days of the Institute's life, when Sir Charles Barry gave £20 to purchase books as a thankoffering for his victory in the Houses of Parliament Competition. [A precedent which might well be followed even to-day.] All members and their friends will be welcome at the opening.

The Exhibition will attempt to reveal, not only to members, but to the lay public, some part of the great wealth in our possession. Since, until the move compelled the clearance of storehouses in Conduit Street, not even those most intimately concerned with the Library were aware of all that we possess, it is probable that the majority of members are still ignorant, and will welcome this opportunity of enlightenment. Pride in our possessions is certainly not the least of many excellent reasons for holding an exhibition: but there are others: The architect should be above all professional men a man of wide culture. The architect whose knowledge of architecture extends no further than his own practice will, at the least, be a dull fellow and probably a bad architect. At all times architecture and its literature have been intimately connected; as much now as ever, when technical knowledge is valued highly, and technical books account for over half the annual additions to the Library. A realisation of how previous generations learnt their good practice from books, and how they displayed it in their drawings is one thing which the Exhibition will show. But for those who are not inclined to patronise didactic exhibitions, it can with equal justice be claimed that this will be an exhibition designed as much to entertain as to teach, with the qualification that the two purposes may not in fact be very far apart if they are well exploited.

The first of the informal general meetings, held on 16 January, was very well attended, and the discussion was both lively and interesting. The case in favour of the subject "Are Standardised Units of Design Necessary," was stated by Mr. E. A. A. Rowse [*A.*]; he was followed by Mr. S. Pointon Taylor [*F.*], who gave the case against. Mr. G. Grey Wornum [*F.*] was in the chair.

Early in the proceedings the employment of standardised units became related to the problem of reducing costs in housing. The speakers against held that their

use would result in an appalling uniformity of life, would deprive the architect of work, and that the alleged reduction in costs would be negligible. Those in favour argued that architecture should be a background to life and the other arts, that variety in massing would avoid monotony, that the combination of units into buildings, together with site planning and the creation of amenities, would provide abundant work for the architect, and finally that the mass production of standardised units had reduced costs enormously in other industries, and therefore that it could be made to do the same thing in building.

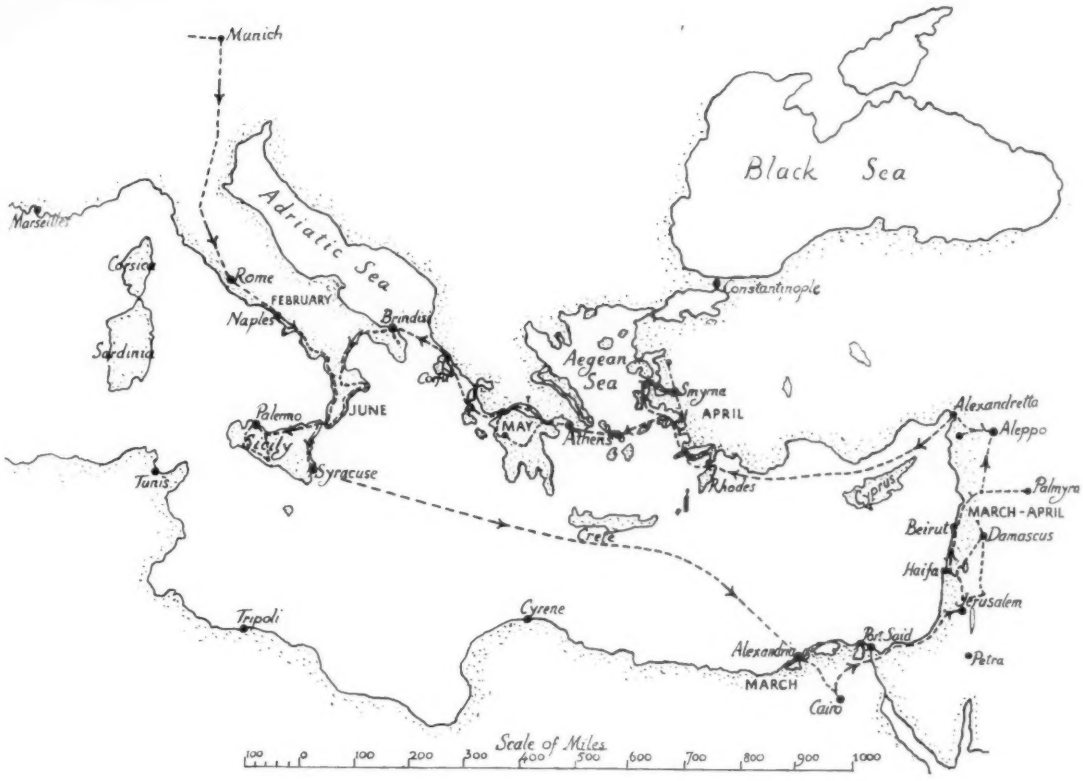
At the end of the main discussion, a secondary one supervened on the meetings themselves. Future subjects, dates, times and the manner of holding the meetings were discussed. It was finally agreed that the manner and particularly the arrangement of the seating (the meeting was held in the Foyer of the Henry Jarvis Hall) should be even more informal and that the subjects, dates and times of the other three meetings to be held in this session should be left to the secretaries of the Standing Committees to decide. The date of the next meeting has now been fixed for Wednesday, 20 February at 6 p.m. Tea will be served from 5.30 p.m. The subject for discussion will be "How can the usefulness of the R.I.B.A. be improved?"

The Social Committee are organising a programme of music to be given in the Henry Florence Hall on the evening of Monday, 25 February. Details will be announced later. The Henry Florence Hall has already proved its efficiency as an exhibition room, as an auditorium for speaking and as a ballroom. This forthcoming function will doubtless prove that it is as equally useful as a room for the hearing of music.

We must apologise for the omission of Dr. J. W. Mackail's name from the list of those who received New Year's honours, which was published in the last JOURNAL. Our pleasure at the supreme distinction of the Order of Merit, which His Majesty has conferred on Dr. Mackail, was such that his name was kept apart so that a special note could be written in these columns to convey the Institute's appreciation. Through the kind of mischance which, to editors, may seem to be the workings of an evil influence, but to more normal people are known to be of much more mundane origin, the paragraph was omitted. Dr. Mackail's connections with architecture are manifold. To thousands whose knowledge of the classics does not enable them to read in Greek or Latin, his translations have given the proper background, without which mere architectural knowledge of ancient monuments is vapid and useless, and they have revealed not less than the powerful phrases of classical literature the beauty of our own language. His faultless use of English is one thing of many which all those will remember who have in the past had the pleasure of listening to his speeches at Institute meetings. Dr. Mackail is, too, the biographer of William Morris—a biography to read and read again, each time with added pleasure, not only for the William Morris it reveals, but for the revelation of its author. We can take this opportunity of recalling two recent papers which Dr. Mackail has contributed to these pages. His paper, "Lay Thoughts on Architecture," in the JOURNAL of 2 April 1932, and more recently a paper on "William Morris" on 14 April 1934. In conclusion, the words of a *Times* leading article on New Year's Day, can be quoted: "It is no academic, in the customary sense, on whom the King has conferred this high honour, but an all-round champion of the unity and interdependence of the manifold tributaries, literary and other, which make up the rich spiritual inheritance of modern man."

The meeting of the R.I.B.A. on Monday, 14 January, when Mr. Edward Maufe criticised the works submitted for the annual award of prizes and studentships, will be fully reported in the next number of the JOURNAL, in which will also appear Mr. A. H. Moberly's address to students, and photographs of all the prizewinning drawings and as many of those which earned commendation as we can manage to include. This number of the JOURNAL has as its leading article Mr. Theodore Fyfe's report of the tour he made in 1934 as the first holder of the Henry Florence Studentship of Hellenistic research. We can take this opportunity to remind members that applications for the 1935 award of these Studentships may be made until 1 February.

The Members' Room in the new building has now been provided with a large number of non-technical weekly and monthly reviews and magazines, so that it may properly be a recreation room for visitors to the building. Architectural periodicals, except for a few which are duplicated in the Members' Room, are all in the Library. Non-professional journals to be seen are *Country Life, The London Mercury, Punch, The Illustrated London News, The Sphere, The Graphic, The Sketch, The Tatler, The Illustrated Sporting and Dramatic News, The Countryman, The Spectator, and The New Statesman and Nation.*



HELLENISTIC ARCHITECTURE

THE HENRY FLORENCE BURSARY REPORT, 1932–1933

BY THEODORE FYFE, M.A. (CANTAB), F.R.I.B.A.

FOREWORD

As the first holder of the Florence Bursary, I thought it best to take a wide survey in the field of enquiry laid down by the Conditions—the Greek and Hellenistic Architecture of the Mediterranean Basin, with special reference to the Eastern Mediterranean. Realising, to some extent, the complexities of the subject, I decided to devote particular attention to the great original centres of the Hellenistic Age, that is, to Alexandria and to Antioch; and if not to Pergamum to the same extent, only because it was already in a more advanced state of investigation. By a tour commencing with the principal museums in Western Europe which have important Greek collections—the Louvre, Munich, Rome and Naples (Berlin I had seen recently)—and by proceeding to Palestine, Transjordan, Syria, Asia Minor, Greece, South Italy and Sicily, I hoped to collect sufficient data for the groundwork of a comparative study of Hellenistic Architecture. Generally speaking, the tour as I originally planned it has been carried out, with the exception of Cyrene.

I had seen previously Athens, Eleusis and Epidauros, in Greece, but I was aware that Athens would require fresh attention in view of the Athenian Agora excavations of the Americans. I had to see Delphi and Olympia, most obviously, but also Bassæ and Tegea—both in the Peloponnese; Bassæ, because it is the greatest crux of Greek architecture and immensely interesting as the precursor of the open cella type of Hellenistic temple with internal buttresses; Tegea, because it was the most important temple in Greece of the fourth century B.C., *and therefore very*

near in date to the great Asian Hellenistic temples. Of the purely Hellenistic sites in Greece and the Greek Islands, Delos was certainly the most important.

I knew that the great field open in Asia Minor necessitated selection, but I placed Didyma first in importance, as the best-preserved of the great Hellenistic temples. Apart from the Hellenistic centres that I was able to visit in Syria, I turned aside to see the "Krak des Chevaliers," perhaps the finest—and certainly the most superbly placed—of the Crusaders' castles; and when in Aleppo I made a day's excursion to see the fifth-century Church of St. Simeon Stylites (Kala't Sima'n), the most interesting Early Christian ruin in Syria or Palestine. The vaulted halls and stairways of the Krak recall Tiryns and the theatre at Miletus. Kala't Sima'n is perhaps within a century of the fourth-century mosaics at Antioch, which are in the full classical tradition. Naturally, when I was in Palestine I absorbed as much as I could of the famous buildings there: and I had the good fortune to go over the Church of the Holy Sepulchre at Jerusalem (including its upper structure) with Mr. W. E. Harvey, the Consultant of the Palestine Government for its repair. The spacious setting of the Dome of the Rock at Jerusalem is even more majestic than that of the Bel Temple at Palmyra. At Palermo I saw Monreale for the second time. I will receive special mention later on.

I hoped to see excavation or repair work in progress, and planned the course of the tour to this end. I was also to see more than I expected. Important Hellenistic tombs at Mustapha Pascha, in Alexandria, were being disclosed while I was there. The complete development plan of Herculaneum, in process of execution, was shown to me; and I was also shown repair works and drawings at Baalbek and Palmyra. At Antioch, where excavations were proceeding, I was shown everything. I was fortunate in being able to spend a long week-end at Jerash with Mr. Crowfoot and Mr. Horsfield, as the guest of the latter. Mr. Crowfoot also showed me the site and buildings of Samaria, and Mr. Concannon showed me the interesting excavations now proceeding at Megiddo. At Izmir, I saw the Græco-Roman site in the town in process of excavation. At Pergamum I had the privilege of being shown over the citadel and the Asklepeion, and of scrutinising the latest plan of the latter, under the personal guidance of the architect in charge. I was also most fortunate in being able to see the Athenian Agora excavations of the American School just before they were closed down for the season, in addition to the excavations proceeding at Corinth.

HELLENISTIC ARCHITECTURE

"*That vague and facile word 'decadent' is often misused, but no misuse could be more flagrant than to apply it to the Greeks of the third and second centuries.*"

J. B. Bury, *The Hellenistic Age.*

Hellenistic architecture continued insensibly from Greek architecture, and was merged quite as insensibly in Roman architecture, but its detail had varying manifestations. In the first century A.D., and even in the two succeeding centuries, the architecture of Rome and of its western provinces was different from that in the eastern provinces of the empire. These were more definitely imbued with Hellenism, with an admixture of Oriental elements. In all late Hellenistic or early Roman work in these eastern provinces, therefore, we can expect to find a Greek spirit which is not so evident in Rome itself. In Palestine and Syria particularly we find it overlapping the beginnings of Christian building. As a result, the term "Roman" for architectural work in these regions, even up to the fourth century A.D., is a misnomer. All of this work is more truly definable as Hellenistic. Lethaby, with his keen insight about essentials, confirms the best historical judgment in recognising that Hellenistic architecture was a continuing growth. "It appears more clearly that all 'Roman' architectural detail was in fact Hellenistic[1] . . . and that, indeed—except in a limited and local sense—there was no Roman architecture."[2]

A further though not strictly architectural aspect should not be lost sight of. The Hellenistic Age has given us almost all the knowledge we possess of Greek decorative painting on a large scale. Such works as those in the National Museum at Naples—the mosaic of the Battle of Issus, and the wall paintings with figure compositions from Pompeii and Herculaneum—are not only great in themselves, but an indication of the even greater work which preceded them, and of which they are, almost exclusively, copies.[3] It does not matter that most of these works are actually Roman in date: they have the Greek spirit without any question.[4]

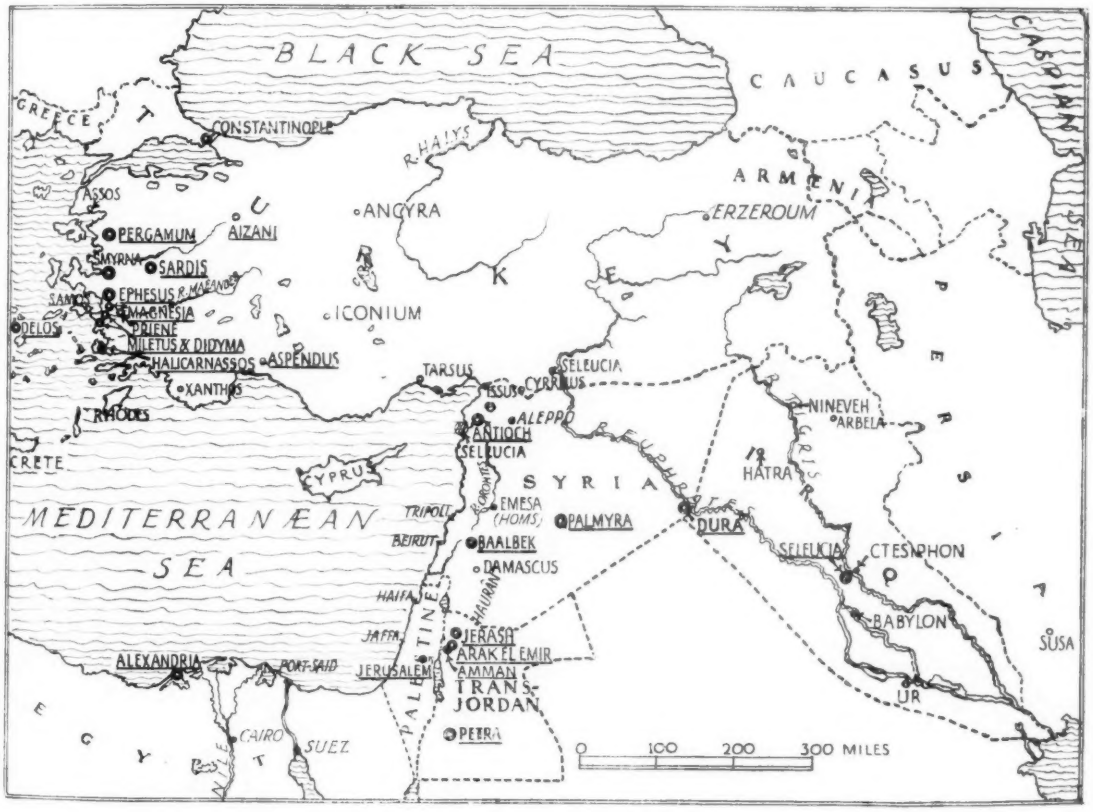
It is convenient to consider Hellenistic art and architecture as commencing with the consolidation of the Macedonian supremacy under Alexander the Great. Work of the first half of the fourth century B.C. may be considered as purely Greek, but work which is later—or certainly from the commencement of the last quarter of that century—should be considered as Hellenistic. So much for the beginning: it is better not to consider any definite ending, but to look for the spirit of Hellenism, whether it be in the first century A.D., or considerably later.

[1] *Antiquities of Ionia*, Part V—(Macmillan and Co., Ltd., 1915)—p. 17.
[2] Ibid., p. 35.
[3] J. B. Beazley and Bernard Ashmole—*Greek Sculpture and Painting*—p. 96. (Cambridge University Press, 1932.)

[4] For historical aspects, I am mainly indebted to Mr. W. W. Tarn (*Hellenistic Civilisation*—2nd edn., London, 1930), Mr. E. R. Bevan (*The House of Seleucus*—2 vols., London, 1902), and M. Pierre Jouguet (*Macedonian Imperialism and the Hellenization of the East*, translated by M. R. Dobie—London, 1928).

The main founts were the separate—but to some extent interrelated—supremacies that began their existence shortly after the death of Alexander in 324 B.C.:—(1) the *Ptolemaic*, with its centre at Alexandria; (2) in 301 B.C.—the *Seleucid*, with its western capital at Antioch on the Orontes; and (3) in mid-third century B.C.—the *Pergamene*, with its centre at Pergamum in Asia Minor. There was a definite school of sculpture which was centred at Rhodes, but this had no appreciable effect on architecture. To what extent the three great supremacies interacted, and to what extent they adopted the forms of pre-existing arts with which they came in contact, are matters of much interest. In considering, for example, the influence of Alexandrian art in Palestine and Syria (and to a lesser extent in Greece) we must realise the Ptolemaic invasions of Cœle Syria and Greece. On the other hand, the widespread orientalism that is to be found in the Hellenistic art of Syria was due to the fact that the Seleucid empire endeavoured to consolidate the pioneer work of Alexander; so that this empire extended nearly as far east as the Indus, with important centres of which Seleucia on the Tigris was only the western gate.

The issues were rather simpler for the Ptolemies. The art and religion of Egypt were dominant and the architectural output during the Hellenistic Age was largely, though not exclusively, Græco-Egyptian. The environment was quite different in Palestine and Transjordan; yet with the Phœnicians on the coast, the Parthians on the east, the Maccabæans in Judæa, and the Nabataeans in Arabia Petræa, the cultural influence of Greek art was paramount. The study of Hellenistic architecture in these regions is of absorbing interest. The strong tradition of the earlier Greek culture which prevailed in Asia Minor maintained a continuation of pure Hellenism which reacted on Pergamene art. In consequence, it was more classical (in the strict sense of that term) than that of further Asia or North Africa.



THE GREEK CONTRIBUTION

Athens and Olympia

We must consider that the great period of the sixth and fifth centuries B.C. was a powerful and significant background, so that any study of the Hellenistic Age should begin with a full appreciation of the earlier output. An overhaul of its main sources yields important comparative material. The Parthenon is the only Greek temple of major size in marble which has the greater part of its cella wall and the whole of its peristyle paving intact on one long side. We note the importance of the paving as an outer base to the cella wall, the perfection of the stepped base of that wall in relation to the scale and character of the entire building.

The Athenian Propylæa show superb handling of large marble masonry. At Didyma, some of the blocks are greater, but there is a certain clumsiness of handling in the mouldings which abut on the threshold of the west doorway. The simplicity of the Athenian treatment is its strength. Both the Parthenon and the Propylæa show ashlar work of a perfection which is rare even in Greece of the fifth century B.C. The beauty of the fitting of the large floor slabs of the Parthenon cella is equally notable.

The sculpture from the temple of Zeus in the museum at Olympia should be compared with work of a slightly earlier period that can be seen in other museums—notably Delphi and the Athenian Acropolis. We see a handling of drapery which is architectonic. The parallel or radial folds have a cross-section which is like that of Doric flutings. These treatments indicate the harmony of sculptural and architectural forms which is so characteristic of the archaic period in Greek art; and it was a larger matter than that of the temple structures alone. An important temple had a multitude of cult figures in its precincts, which must have assisted the impression of wholeness.

Bassæ and Tegea

Nowhere is progression towards Hellenistic usage better illustrated than at Bassæ and Tegea. The temple at Bassæ has raised problems since its re-discovery by Cockerell and Haller von Hallerstein, commencing with the remoteness and inaccessibility of its site.[1] Its Doric capitals are almost more Hellenistic than Greek. They are unique for their date in the steepness of the echinus, yet the necking, with its three grooves, is of archaic character. Most unusual, also, is the sunk drafting at the base of the cella orthostats; but these matters of detail have received less attention than the planning and general arrangement.

The deliberate turning outside-in of the idea of the Parthenon frieze suggests a designer who was familiar with that frieze. The frieze may well have given *raison d'être* for the whole cella treatment. The important fact remains that the internally buttressed cella at Bassæ was the first of that type, repeated at Tegea and at Didyma.[2]

The date of the temple of Athena Alea at Tegea is placed at about 355 B.C., and Scopas, as sculptor-architect, has been credited with its execution. It was a major Doric temple of the first class, the most important one in Greece of the fourth century B.C.; the other important one being the temple of Zeus at Nemea, built about 30 years later.[3] At Nemea there are three standing columns: at Tegea, unfortunately, only groundworks and some cella orthostats. The temple had a cella of a single chamber, but with internal engaged semi-columns of a different order from those of the peristyle. It can be regarded as the successor of Bassæ and the precursor of Didyma: an introduction to Hellenistic architecture on plan grounds alone, but with even more interesting confirmation of this in its detail. The Doric capitals of the external order show that extra refining down which became more evident still in the third and second centuries. Even more significant are the details of the internal order, which give us the real bridge between the respective exuberances of the fourth century in Greece and the Syrian temples of early Roman times.[4]

Pæstum and Selinus

For their siting, impressiveness and available material, Pæstum in Magna Grecia and Selinus in Sicily are more important than anything outside Athens and Delphi, not even excepting Akragas (Agrigentum). The three temples at Pæstum are intact to a great extent, and the Poseidon temple is in a more perfect state of preservation than any other Greek temple that exists. Modern excavation has made the site of Pæstum an ordered arrangement, in place of the lonely waste it was till the beginning of this century. The western roadway which runs continuously past the sea-fronts of the temples is in relation not only to them but to an extensive system of public buildings which was placed between the Poseidon and Ceres temples. This had, as its focal point, another roadway proceeding towards the sea, which crossed the western road at right angles. The town walls which lay on the east and south have been cleared and made an intelligible part of this great system. Finally, the great paved space with its altar base at the east end of the Poseidon temple, makes that building much more effective.

[1] Even nowadays its most accessible approach is from Andritsena (itself an isolated centre with no through road to the west), by a rough track of seven miles in wild and mountainous country, possible only for hardened walkers or by riding a sure-footed beast.

[2] For the most recent research see *The Temple of Apollo at Bassæ*, by W. B. Dinsmoor—Metropolitan Museum Studies, Vol. IV, p. 204 (New York, 1933).

[3] D. S. Robertson, *Greek and Roman Architecture* (Cambridge University Press, 1929), p. 145 and Appendix I, p. 329. The Chronological Tables and Bibliography in Prof. Robertson's fine book, make us specially indebted to him.

[4] The base course is the first evidence of a Hellenistic type, seen most notably on the Mausoleum at Belevi (*vide* p. 368 below).

Like Pæstum, Selinus had a main paved street running north and south to the west of its acropolis temples, but the treatments of the two sites were, of necessity, radically different. The port of Selinus entered into the heart of the town and divided it into two sections. From early in the sixth century B.C. both sections must have been of equal importance, as each contained great temples. From their impressive positions and close spacing, it is obvious that the two groups of temples must have marked sanctuary sites of great importance. What is now known as the acropolis site—containing temples A, B, C and D (there is no certain knowledge of their true ascriptions)—appears to have been strongly fortified. The evidences of walling, gates and towers on this section of the site are extremely valuable.

A proper study of Selinus must include the splendid architectural pieces which have been removed from it and which are finely displayed in the museum at Palermo; where also can be seen notable fragments from other Sicilian sites, especially Himera. The whole series, together with the still earlier remains in the museum at Corfu[1] (Corcyra), are the most valuable in existence for the close study of stone and marble treatments in archaic Doric. The upstanding gutter-parapets of Himera are more pronounced than those of the archaic temple at Ephesus. This usage was abandoned in fifth century Attica, but was revived in an Assyrian form in the late Hellenistic East, *e.g.*, in the temple of Bel at Palmyra.

Sculpture, carving and coloured decoration

It is impossible to deal with this great subject in any detail here, but some additional notes may be given in a second section of this report. Sculpture must be included because it is essential to recognise the traditional uses of it in direct association with Greek buildings, not only in sculptured metopes, friezes, parapets, gutters and caryatids, but when free-standing, as in the Zeus at Olympia or the Athena Parthenos. If the study of Greek architecture is to be of any real value to the modern world of architects and craftsmen, it must be a whole study and not a partial one. We must, for example, think of the Parthenon not in its most obvious form as a sculptured building, but in relation to the known decoration of the Propylæa which led up to it. Any consideration of the actual light effects of the Propylæa, even as they exist to-day, will make the enthusiasm of the ancients over their painted walls and ceilings quite easy to understand.[2]

The synthetic use of colour as an accessory to interior effects is a matter which interests us enormously to-day. We are beginning to discover uses for colour in a great variety of ways and circumstances. Full appreciation of the classical uses of it should be, therefore, of paramount importance to us. Colour was, undoubtedly, to the Greeks, a matter of skilful adaptation to certain lights, of the use of reflected light, of the relative importance of natural material having rich colour quality, contrasting, in harmonious association, with applied colour on material which called for it. We find all these problems in front of us nowadays. It is this which makes the contemplation of one of the supreme interiors of the world—that of the basilican church at Monreale—such a revelation and delight. The airy spaciousness, the cool tranquillity combined with splendour, and the beauty of the detail in this truly classic interior, all combine to give the best impression that exists to-day of completely finished Greek and Hellenistic treatments.

EGYPT

Alexandria

Alexandria was a Hellenistic creation and did not exist as a Greek city. In many respects it offers, up to the present, the most valuable ground for the preliminary study of Hellenistic architecture. Although, to-day, the Ptolemaic city is almost completely obliterated, the sites of the Pharos, Museum, Library, Royal Palace, Serapeum and other famous buildings are known, at least approximately, and some of their foundation stones actually exist.[3] It is also highly probable that the great east-to-west thoroughfare ("Canopic Way") of ancient Alexandria was, roughly, on the line of the modern Rue Fouad Premier. One need not go further into matters of this sort. They can be studied fully in several publications.[4] There are, however, actual remains of the Hellenistic age which should receive more attention; notably, the catacombs of Kom el Shugafa and Aufushy, the tombs at Mustapha Pascha, and the fragments in the Municipal Museum. From all the evidences available, we find that the Ptolemies, who, after all, were Macedonian Greeks, executed work in the pure Greek tradition, as well as work which was Græco-Egyptian, or even almost entirely Egyptian.

[1] The pediment of the Gorgon temple, possibly dating from the seventh century B.C., has now been set up in the museum.

[2] See Pausanias's *Description of Greece*.

[3] The dark patches visible under the sea, beside the new promenade on Cape Lochias, are probably foundation walls of the Royal Palace. Mr. Armstrong assured me that these showed as actual masonry, until quite recently. They are now covered with seaweed.

[4] See, particularly, vol. 4 of Methuen's *History of Egypt*, by Edwyn Bevan—1927; and Breccia. E. M. Forster's *Alexandria, a History and a Guide* (1919) will also be found useful.

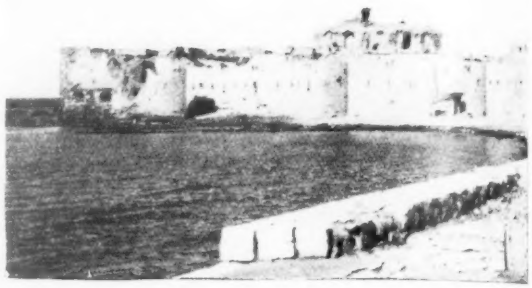
Kom el Shugafa and Aufushy

These catacombs would be remarkable as rock-cut architecture alone. The former have a deliberate scheme for the production of an effect, as the climax of an involved but considered approach, no doubt borrowed from Egyptian temple usage. They show a combination of features which are both markedly Egyptian and purely classical.

Though they date from the first and second centuries A D. mostly, and are therefore nominally Roman, there are earlier elements at Aufushy and the outlook is Hellenistic of Egyptian type.[1]

Mustapha Pascha

The underground tombs at Mustapha Pascha now in process of excavation, are in sandhills near the sea about 3½ miles from the centre of modern Alexandria. Their existence was unsuspected until about a year ago and they were discovered quite accidentally. Two separate systems have been disclosed, both consisting of two vestibule compartments each about 23 feet square and divided by a loggia, with tomb recesses opening out on one or more sides. The staircase of one system is very complete. There were undoubtedly flat ceilings, but these have disappeared. The architectural treatment is Hellenistic Doric of great purity, with or without engaged or free-standing columns and with no traces of Egyptian influence. The major part of the work is cut out of the soft sandstone rock, but there is a certain amount of masonry facing to supplement the rock in places or to straighten it out.



ALEXANDRIA
The Pharos site at Fort Kaid Bey

ALEXANDRIA
Underground tombs at Mustapha Pascha

In the most important tomb recess the sarcophagus was of couch-type, a favourite form in Hellenistic tombs of the third century B.C. or later. The recumbent figure no longer exists, but the couch is a remarkable piece of work with coloured plaster imitations of a mattress and of shaped wooden legs.[2]

The great value of this work at Mustapha Pascha lies in the completeness of its Greek architectural features. Nothing so well preserved, apart from domestic work, has yet been discovered on any Hellenistic site dating from such an early period, as these tombs can hardly be later than the second century B.C., and they might well belong to the latter part of the third century.

[1] For descriptions, with illustrations and plans, see the excellent guide book *Alexandria ad Egyptum*, by Dr. Ev. Breccia (late Director of the Municipal Museum), issued in English and French—(Bergamo, Istituto Italiano d'arti grafiche, 1922).

[2] I am indebted to Dr. Adriani, the Director of the Municipal Museum, who is conducting the excavations, for giving me full facilities to take notes and photographs, and to make sketches of these tombs.

The Serapeum and the Pharos

The most important open sites remaining in the Alexandria of to-day are the Serapeum and the Pharos. All that is now left of the Serapeum is part of the platform, specially remarkable because it was raised artificially in its entire extent, and not built wholly or partly on rock. It was of vast extent, containing subsidiary temples besides the main one. In the Serapis temple was the statue of the god, apparently in the manner of Bryaxis, the pupil of Scopas, but of late Ptolemaic date. It must have been a *tour de force*, valuable to us as showing the technique of chryselephantine statuary carried a stage further than the Athena Parthenos and the Zeus at Olympia.[1] The Pharos was regarded as one of the seven wonders of the ancient world.[2] The buildings on its site, known as Fort Kaid Bey and now occupied as a military post by the Egyptian Government, date to a great extent from the fifteenth century, though Mohamed Ali effected considerable additions and reconstructions in the nineteenth century. The central part, or keep, represents approximately, in area, the base of the Pharos, and a proper examination of it is overdue. The original structure was a tall tower serving the purpose of a lighthouse, surrounded by a wide enclosure. It was square on plan with battered walls. Above this rose an octagonal portion surmounted by a circular lantern with a conical top, on which stood a statue. The whole structure was full of ingenuities—staircases, inclined ramps, mirrors for the reflection of light, and all the mechanical contrivances which the most advanced minds of the day could invent, and Alexandria contained the greatest scientists of that age. Its form is known fairly closely, and all restorations on paper agree substantially. Its height has been estimated at over 400 feet.[3]

ABUSIR, NEAR ALEXANDRIA
The beacon tower

Canopus and Abusir

Many Ptolemaic sites near Alexandria are vivid, though sadly neglected. Canopus, about 8 miles to the east, on a fine site beside the sea, shows only hardly recognisable groundworks, but there are interesting fragments lying about, including twisted porphyry columns, probably of the Roman period. The Osireion at Abusir, about 30 miles west of Alexandria, is an imposing site, particularly from within and from outside its sea-wall. If, as is supposed, this was a temple of Osiris, it must have had an unusual plan, though probably it was an area which enclosed a temple. The other important monument at Abusir is the beacon tower (presumably), the lower part a finely constructed octagon on a square base, and the upper part—of smaller masonry—a circular tower on a projecting base. This structure, like the temple, is in a very ruinous state. Unfortunately, there has been no attempt to keep either of them in proper repair.

The Municipal Museum

For several things this is quite first class: (1) For its Hellenistic architectural pieces, which are admirably arranged and treated with suitable importance; (2) For its Hellenistic sculpture, several pieces of which are original; (3) For its Hellenistic terra-cottas, which are in a class apart, as there are some completely coloured specimens; (4) For its Ptolemaic coinage. It is impossible to understand a most important side of Hellenistic art thoroughly, without visiting this museum.

[1] See Breccia *op. cit.*

[2] The others were: (1) The Zeus Olympios; (2) The Great Pyramid of Gizeh; (3) The Hanging Gardens of Babylon; (4) The Mausoleum at Halicarnassus; (5) The Temple of Artemis at Ephesus; (6) The Colossus at Rhodes. The three last mentioned were Hellenistic works.

[3] See Bevan *op. cit.* and Breccia *op. cit.* D. S. Robertson (*op. cit.*, p. 185) thinks that the original structure may have been wholly square on plan with recessed storeys. The structure has been re-examined in the light of recently discovered Arab evidence in *The Pharos of Alexandria*—summary of an essay in Spanish by Don Miguel de Asin (communicated by the Duke of Alba). Proceedings of the British Academy, Vol. XIX, 1933. I am indebted to Mr. Tarn for this reference.

SYRIA, PALESTINE AND TRANSJORDAN

The Holy Land and the regions on the north, south and east of it are so remarkable that they demand a word of description. Their attraction to the Macedonian Greeks can be understood. Whoever held the entire seaboard of these regions held the key to the East. The present political divisions broadly correspond to what existed in pre-classical times, as they are more or less inevitable geographically. The outstanding feature—the Jordan valley—extending north and south for over 100 miles, falls from more than 1,000 feet above sea-level at the source of the Jordan in the Hermon range, to 1,300 feet below sea-level, where the river ends in the Dead Sea. The valley is closed in on the north by Hermon and the Damascus plateau, on the west by the mountains of Galilee, Samaria and Judæa, and on the east by the mountains of Moab. A visit to the Dead Sea from Jerusalem is now an afternoon's excursion in a motor-car, but it means a giddy descent, as Jerusalem is ensconced high up in the Judæan hills, 2,600 feet above sea-level. Baalbek, in the Anti-Lebanon, north of Damascus, has an altitude of 3,773 feet. Even the desert outpost of Palmyra is 1,310 feet above sea-level.

These facts about altitude are apt to escape attention. They help us to realise that so much mountainous country, strongly volcanic, provides excellent building stone. Syria is, above all, a stone country, but a dark basaltic stone of very fine quality is prevalent in the entire region. The quarries of Baalbek, situated in a spur of the Anti-Lebanon, were capable of providing blocks of quite exceptional size in a lighter variety of this stone. The western substructure of the acropolis show three such blocks, which are all over 63 feet in length; and there is an abandoned block in the quarry, which is 70 feet.

BAALBEK
Entablature fragments of Jupiter's temple

Baalbek

Baalbek is the best site to begin with in Syria.[1] Itssetting, on an eminence overlooking the wide valley of the Litani and with the Lebanon range beyond, is worthy of its monumental character. The assemblage of units which commence with the propylæum and terminate in the Temple of Jupiter is the finest classical achievement in axial planning that we are aware of.[2] The actual scale of the whole and the superb siting of the temple are most impressive. The temple itself, like most Syrian ones, has unfluted columns. Its

BAALBEK
Temple of Bacchus, view from south-west

[1] The term is taken in a wide sense, to include the classical "Cœle Syria"; *i.e.*, practically all of what we now call Syria, Palestine and Transjordan, except a section of the coastal region, which was "Phœnicia."

[2] Mr. A. W. Lawrence has suggested to me that the plan might have Semitic elements.

entablature is Hellenistic in style, rich, but at the same time severe. The free scroll-work and recurrent lion-heads of the cornice are in the direct tradition of Tegea and Priene.

It is thought by the French excavators now at work that the Temple of Bacchus is later in date, but it is, none the less, pronouncedly Hellenistic.[1] Its plan, as anticipating the sanctuary motives of the Christian basilica, is of great interest. The engaged columns of its interior cella wall carry on a late Greek and Hellenistic usage. The entrance doorway is the most beautiful of its kind belonging to the classical age. The splendid slab-ceiling of the peristyle, slightly segmental in cross-section, shows a strong Oriental influence in the rich carving and sculpture of the diagonally set panels.

The "Circular Temple" shows almost Gothic freedom in its adaptations of classical forms made to fit such a unique treatment. The entrance doorway is exceptionally interesting. It is an assembling of flat rounds and planes like those that are met with in sixth-century Byzantine work.[2] Both this temple and the Bacchus Temple exhibit the panelled dado band at the top of the cella wall plinth, a characteristic which is found also at Palmyra and elsewhere in Syria.

Apart from the great interest of its planning and its detail, Baalbek is a *tour de force* of engineering construction. The sloped passageway, ultimately vaulted over, leading downwards towards the entrance from the west end of the great court, is an arrangement one might expect for the provision of modern motor-cars.

Jerash[3] *(Gerasa)*

It is fitting to consider Jerash after Baalbek. Though it is a complete town and not a monumental arrangement the sites of both demanded great stepways, not required in flat sites like Palmyra or Antioch. The situation of Jerash, on one side of a remote but beautiful valley in Transjordan, is romantic in the extreme. Its main longitudinal artery, a colonnaded street running north and south and nearly level in the main, forms a traverse along the higher ground of the valley. This street is exceedingly well preserved in its groundworks and is fortunate in possessing a section of the colonnade at the south end, where a downward slope of the roadway has produced a unique stepped arrangement in the entablatures. There are important arched gateways, still largely intact, at the two ends of the road, the one at the south end being associated with an oval forum surrounded by a colonnade. On the higher ground to the west of the street were a theatre and other important buildings, culminating in the fine Temple of Artemis. The approaches to this part of the site are by two stepped crossroads, which gave an opportunity—fully taken advantage of—for entrance treatments of great dignity. Lining the street on the west side was a row of shops. A portion of the front, with doors and windows, is still largely intact. There were doubtless shops on the other side of the street, but nothing here exists except groundworks, and the hill beyond slopes very steeply to the wooded river-bed below.

In its detail treatments, Jerash shows some very interesting characteristics. The floreated lower parts of the shafts of the engaged columns in the south gateway are rare, though not unique.[4] Though there is very little work quite as refined as the best at Baalbek, there is a general sense of scale, even with varying column heights, which is admirable and striking. The propylæum is still a noble feature, as also is the approach to the cathedral, despite its patchwork additions by Early Christian architects. Jerash has been aptly described by Mr. Horsfield as the most perfect town of the first, second and third centuries A.D. now existing in Syria, Palestine or Transjordan.

Arâk el-Emîr

Arâk el-Emîr contains one of the most remarkable buildings in Transjordan, and I regret that I was not able to visit it. Very few people have visited it, but Mr. Horsfield admits its great interest. The principal structure, the purpose of which is not quite clear, was certainly built before Roman times, quite possibly in the third century B.C., but it may have been partly rebuilt. The site is complicated, as there is more than one ruined building on it. It is difficult of access and off the beaten track in the mountains of Moab, between Amman (the Ptolemaic "Philadelphia") and Jericho.[5]

Petra

Though I was not able to visit Petra, fine photographs taken by Mr. Horsfield, coupled with others taken by the American Colony Bureau in Jerusalem, give a clear picture of the motives and detail at this amazing centre. It should be realised that the well-known rock-cut productions are not the only evidences. There are important detached buildings, of which the most interesting is the Kasr-el-Bint ("House of the Virgin"), constructed with massive stone blocks. These have been investigated in a preliminary way by Wiegand, who also gives a rough drawing of the side door of El Khazne ("the treasury"), the most famous of the rock-cut works.[6] This remarkable door might have been built by Baldassare Peruzzi, though the capitals of its jambs also recall those of the inner pilasters of the Didymaion at Miletus. It is difficult, at least until further examination has been made, to give any definite data for the Petræan work. The best of it might well be anterior to the first century A.D. In thinking of parallels

[1] Fully described and illustrated in Wiegand's publication of 1923.

[2] *cf.* the blocked-out architrave of the central west door in the Church of the Nativity at Bethlehem.

[3] For a good general account, see M. I. Rostovtsev's *Caravan Cities*, translated by D. and T. Talbot Rice from the Russian (Oxford, 1932).

[4] *cf.* some noble blocks in the Alexandria Museum. The motive may have been a Ptolemaic one.

[5] See de Vogüé—*Le Temple de Jérusalem* (Paris, 1864). Also H. C. Butler in Publications of the Princeton University Archæological Expeditions to Syria, Division II, Section A, Part I. (Leyden, 1907.) This is the fullest account, with restorations.

[6] *Petra*—(Wissenschaftl. ver. des deutsch-türkischen Denkmalerschutz Kommandos—Berlin, 1921).

JERASH
Above: South Gateway
Below: Main Street and Propylæum

to its rock-cut architecture we must not forget Medâin Sâlih, that still more inaccessible site on the road to Mecca which has been described by C. M. Doughty in *Arabia Deserta*; but it would appear that the more slender output of the Maccabæan tombs in the Kidron valley at Jerusalem is an important parallel, at any rate to the Greek-inspired work at Petra; and there is evidently work at Petra which is not so inspired. Wiegand sees in the rock-cut output a fantastic basis, and he regards it as due to craftsmen who were primarily scenic artists. Mr. Horsfield is not of this opinion, and he is our principal authority.[1]

Palmyra

The approach to Palmyra from Homs (the ancient Emesa) is one of the most remarkable experiences that any traveller can have; all the more so nowadays, when the swift transit of a motor-car shows the indescribable changes of atmosphere and colour in a series of rapid pictures, each emerging softly but suddenly, and fading just as quickly. After the first 20 miles or so of hilly ground, when all villages are left behind, the constantly recurring mirage increases the element of fantasy. For mile after mile the route is taken along one of the many age-long tracks, often deeply rutted, and, in wet weather, treacherously slimy, that run criss-cross on uneven ground, or along stretches of perfectly flat sand; relieved by small inland seas with green tufts, providing no nourishment save to goats and camels. Then the hills that have kept monotonously apart, nearly join, just as suddenly as everything else that happens in this unique journey. The ground rises somewhat. The hills on the right become cliffs of sand, full of magical colour in the afternoon sunlight. An Arab fortress—the outpost of Palmyra—appears high up on the right. In a wilderness of stony, uneven ground, the grave-towers show themselves; then, the rest of the ancient city, culminating in the Bel Temple and the Arab village, beside its vivid patch of green. It must have had this remoteness always. On the direct route to Mesopotamia it was a resting place between the 100 miles of introduction to the desert and the real desert, which stretches as far as the eye can reach to a level eastern horizon—a sea of beautiful colour in the spring.

Palmrya is more comparable with Jerash than with Baalbek, but much still remains to be determined. It is rational to assume that the lay-out was part of a gradual process, which had a pre-conceived scheme. It is not likely that any portion of it existed before the Roman occupation, as M. Amy—the resident architect—informed me that remains of true Hellenistic date are practically non-existent. It is noteworthy that there are no evidences of Hellenistic Doric at Palmyra. So far as I am aware there are no such evidences on any site in Syria, Palestine or Transjordan, except at Jerusalem (see below, p. 363) and in the Tomb of Hamrath at Suweida, in the Hauran.[2]

The Bel Temple is the greatest building at Palmyra. It belongs to the first century A.D., though its extensive walled and cloistered precinct is mostly of later date. The temple itself must be regarded as the most superb structure of the Romano-Hellenistic age of which we have any knowledge. We might well consider that within its highly original plan it assembled the most advanced features and the strangest details that were possible for a building of classical type; yet these were associated with lovely slender columns having the utmost purity of line. Its builders must have commanded the best craftsmen available, as the capitals of the external order were bronze sheathings—presumably Corinthian—on the stone cores which we see to-day.[3]

Palmyra as a whole is too great a subject to be discussed without much fuller knowledge than can be obtained from a brief visit, but some of the detailed treatments are illuminating and vivid. Nowhere—apart from the Bel Temple and the tri-pylon—can they be studied to better advantage than in the two sections of the Necropolis at the western end of the site. The evidences are scattered about, apparently without any regular plan. Of the grave-towers, the tallest and most conspicuous is the "Elahbel" tomb, which is impressive both externally and internally. This tomb is perhaps the most important monument of its class existing, though there are others of the same type, with variations, at Palmyra. Its treatment is Hellenistic, a true development from Greek work, both in conception and detail. It is wholly executed in finished stone.[4]

The "Painted Tomb" (or "Trois Frères") is in the southern section of the Necropolis. It is underground and rock-cut, with a sloping dromos and a built-stone doorway in its front. It is rectangular in plan, about 12 or 14 feet across and about 20 to 25 feet long.[5] Side recesses for burials (as in the grave-towers and in the Alexandrian tombs) open out between pilasters, and these, numbering three on each side, are continued along the end wall, which has a tympanum. A projecting band forms a horizontal line right round above the pilasters. The roof is a semi-circular barrel-vault. The

[1] See Wiegand *op. cit.* Mr. and Mrs. Horsfield's forthcoming book on the Nabatæan output, to be published by the Cambridge Press, will include a valuable account of the architecture. The only architectural drawings of the rock-cut tombs are the admirable plan, elevation and section of El Khazne, by the late F. G. Newton, published in the Palestine Exploration Fund Annual of 1911, unfortunately small in the reproduction. They are quite accurate, as they were based on careful survey on the spot. The great scale of the actual work is apparent. The main order is about 55 feet high and the total front is well over twice that height.

[2] See S. B. Murray, *Hellenistic Architecture in Syria* (Princeton, 1921).

[3] For capitals of Corinthian type in Syria, particularly at Palmyra, see *Les formes anciennes du chapiteau Corinthien*, by Daniel Schlumberger. (Extract from the Review, *Syria*, Paris, 1933.)

[4] Wiegand illustrates the interior of this and of the "Kamlishu" tomb by drawings from Cassas—(*Palmyra*, by Theodor Wiegand and others, 2 vols.—text and plates, Berlin, 1932).

[5] These figures are very approximate. They may be understated.

[Photo: Direction des Antiquités, Beyrouth—by permission

PALMYRA

Temple of Bel. Interior, looking north

[*Photo: Direction des Antiquités, Beyrouth—by permission*

PALMYRA
Temple of Bel from the east

[*Photo: Miss Alene Williams*

PALMYRA
Precinct of Bel Temple and oasis, looking south-west

whole of the interior is stuccoed with a painted finish. The side pilasters have figure treatments, the end ones, round or oval medallions, perhaps containing portrait heads.

Antioch

The situation of Antioch is different from those of the other sites that have been mentioned. Unlike Baalbek and Jerash, it has no pronounced acropolis, nor was it dependent on steeply sloping ground. Unlike Palmyra it was not in the desert. It was built on the banks of the greatest river in Syria—the Orontes—here flowing smoothly through a wide valley, so wide as to become almost a plain; yet, as river and site were nearer the enclosing hills on the south side of the valley, the town may have crept up them a little. At its eastern end, the valley widens out into a spacious plain many miles wide. At its western end, it becomes the involved country through which the Orontes plunges in its last tortuous windings to the sea.

Though there is now a fine road approach on the south, from Latakiyeh on the Syrian coast, the natural approaches are from Aleppo on the east and from Alexandretta on the north. Both routes traverse the last two miles in the wide, fertile valley of the Orontes. The northern one then makes a compass of the "Lake of Antioch," before turning in a north-westerly direction towards a pass in the hills. By some such route must Alexander have entered Syria from Asia Minor, after passing the Cilician Gates. The road to Aleppo is through wild, hilly country, with important Early Christian remains. Nearer Aleppo, approached through desolate and stony hills from the main road, is that wonderful ruin—Kala'ţ Sima'n.

The site itself is grand and romantic. Its bridge-head on the Orontes offered opportunity for dramatic treatment, and some 4 miles west of this, the narrowing valley provided a higher plateau, overlooking beautifully wooded springs of water. This was Daphne, celebrated in Roman Antioch as a pleasure resort.[1] Chance discovery has already afforded ample evidence of the luxurious villas that were built in its sylvan scenery in the fourth century. Not of this character was Mt. Silpius, frowning over the city on its southern side, and riven with deep clefts, one in particular containing a stupendous waterfall. From the track high up above the stream we can still approach the great ruined Byzantine bridge-head built by Theodosius, known as the "Iron-Gates." One can imagine that the Antiochenes looked with misgiving on Mt. Silpius. It was certainly their undoing in the sixth century, when the invading Persians swooped unexpectedly down the pass, stormed the Iron-Gates and involved them in utter destruction.

Excavations at Antioch have now completed their third year. They commenced in 1932, at the eastern end, on the low-lying ground beside the Orontes. Dr. Clarence Fisher, then acting as American Field Director, believed that the island existed here, which Antiochus the Great was said to have built upon at the end of the third century B.C. The Roman hippodrome was cleared. This building was quite near, and even partly above, the surface. The most important results of that season's excavations, however, were three fine floor mosaics of the first century A.D. These were subject-panels with geometric borders, but two had rich floral inner borders in addition.[2]

Events in 1933 necessitated excavation at Daphne. The discovery of the "Yakto" mosaic[3] there was followed by that of an important house having a large cruciform room higher up on the plateau. This contained the "Huntress" mosaic, and the even more important "Thalassa" mosaic. The discovery of a bath chamber in the same region yielded another fine floor.

Towards the close of the season, Mr. W. A. Campbell (then acting as Field-Director) found that yet another important discovery necessitated a return to the eastern end of the town. A chance pit dug by a cultivator disclosed white mosaic, which belonged to a large room measuring 60 feet by 25 feet, having a floor of seven panels arranged round a large central panel.

It is noteworthy that all these mosaics belong to the fourth century, and prove clearly that even at that late date fine classical paintings or mosaics were available for the artists to copy. The interesting discovery of a cruder but contemporary mosaic in a style which could be called Early Christian, shows that there were two schools of work in operation; or—as put by Mr. Campbell—that when left to their own devices, the mosaic-workers were not capable of producing work in the grand manner. None of these finds were much below the surface, as might be expected from their date.

Meanwhile, in last season's work (1934), Mr. Campbell proceeded with the eastern excavations. When I arrived in the early part of April, he thought he had struck the region of a thermal building, of which the large room before mentioned might be the central hall.

It is obvious that a lengthy and difficult campaign lies in front of the explorers. The production of a definite plan of the ancient city in any of its phases, if possible at all, will involve many years of strenuous work. On the other hand, the discovery of mosaics is a very hopeful sign, apart from the intrinsic value of these evidences. Mosaics usually indicate defined floor areas, and these, in turn, mean plans. It is not unlikely that some of the deeper and more undisturbed areas will yield structural material in position, or in fragments. Such discoveries would be of the utmost value. We have hardly any knowledge, at present, of an Antiochene contribution to architectural style in the Hellenistic Age; but the mosaics lead one to expect architectural settings of equal importance. At its best, the site will disclose the most interesting Hellenistic lay-out in existence. At its worst, it will almost certainly continue to yield mosaics.

[1] See Förster's *Antioch*.

[2] These panels are now respectively in Princeton (this one, unfortunately incomplete), in Worcester (Mass.), and in the Louvre.

[3] A curious affair, mostly hunting beasts. This motive seems strongly Oriental.

Enough has been found already to make Antioch of greater service to our knowledge of Greek and Hellenistic painting than any other sites except Pompeii and Herculaneum.[1]

Palestine

Hellenistic work in Palestine proper, apart from the fact that its actual output was comparatively meagre, is more difficult to grasp than that of Syria and Transjordan; yet de Vögué, in his great book—*Le Temple de Jérusalem* (1864)—sensed with truth the wider implications of such important later monuments as the Dome of the Rock and the Golden Gate. The profound interest that has been maintained since the Crusades in the buildings of the first Christian emperor and of his successors—centred in the Church of the Holy Sepulchre—and the equally great interest of modern times in the early Arab work at Jerusalem, have tended to distract attention from the Hellenistic influences that certainly affected both of these manifestations. That Palestine, despite the powerful influences of Judaism, could still exhibit work that was strongly Greek, can be seen in the tombs of the Kidron Valley; but it is a more fascinating study to trace the later and more elusive influences of Hellenism in the mosaics of the Dome of the Rock and the carved mouldings of the Golden Gate.

Dr. Mayer dates the "Absalom" Tomb (and presumably the others) as Maccabæan work of the second century B.C. He ascribes the finest of the "Tombs of the Kings" (known as Queen Helena's) to the first century B.C.

In concluding this portion of my Report, I am well aware of its limitations. I was unable to visit Dana, between Aleppo and Alexandretta; also Sanamein, Suweidâ, Si, and other important places in the Haurân. All of them are deeply interesting, and all show strong Hellenistic influence. The Haurân is a study in itself, which demands a considerable amount of time. H. C. Butler's admirable work on its monuments is well known.[2]

[1] Just before going to press, I heard from Mr. Campbell that at the close of the 1934 excavations, he had made many discoveries, including the location of a Hellenistic colonnaded street 10 metres below the modern road to Aleppo; and that he had dug up "quantities of fine mosaics."—T. F.

[2] *Architecture and Other Arts* (New York, 1904). See also Princeton University Archæological Expeditions to Syria, 1904-5 and 1909.

[*Photo: Mr. W. A. Campbell—by permission*

ANTIOCH. Mosaic of Fourth Century A.D., "Ge and the Karpoi"

ASIA MINOR

Asia Minor was the original home of Hellenistic art. As the intervening territory between Macedonia and Syria, containing many rich cities which had existed from the sixth century B.C. or earlier, it was also a battle-ground during the period following the death of Alexander, before Rome became wholly dominant. Its earlier heritage was confined for the most part to its western quarter, where the Ionian Greeks settled in very early times. The best-known centres of this Ionian civilisation are Ephesus and Samos, but there were many others. Regionally, it stretched from the north of the Gulf of Smyrna to Caria, on the south, and all of its centres were on or comparatively near the coast.

The most prominent feature of the west coast of Asia Minor is the great peninsula which divides the Gulf of Smyrna, on the north, from the wider and shallower bay in which Ephesus is situated, on the south. A mountainous region, extending inland for nearly 100 miles, embraces the whole of this coastal area, and descends, on the north, to the plain of the Hermus, on the south to the plain of the Mæander; the Mæander itself discharging some 20 miles south of the bay of Ephesus. Two large and fertile islands lie off the Ionian coast—Samos, very close to the south end of the bay of Ephesus, and Chios, about six miles from the tip of the Smyrna peninsula. The comparatively narrow area of this region, including the islands, about 85 miles from north to south and 70 miles from east to west, contained the 12 cities of the Ionian Confederacy, of which several became important Hellenistic centres; but the Macedonian expansion, by throwing open the whole of Asia Minor to Greek influence, resulted also in the fruits of the set policy of Alexander and his successors—the building of new cities and the transforming of old ones in the areas of conquest. Those that remain most architecturally notable, apart from Sardis (from N. to S. and from S. to E. along the coastal region), are Pergamum, Teos, Ephesus, Magnesia-ad-Mæandrum, Priene, Miletus, Didyma, Halicarnassus, Telmissos, Termessus, Sillyon and Aspendus. Sardis is in a class by itself. It was originally the capital of the ancient Lydian monarchy, made famous in the fourth century B.C. by the Temple of Cybele. It is situated some 50 miles in a straight line almost due east from Smyrna, but it was directly accessible from the valley of the Hermus river.[1]

This, of course, is not the full list of classical centres—Greek and Hellenistic—in Asia Minor. After the Seleucid colonisation in the third century B.C. there were over 40 cities, additional to those already mentioned, west of the Halys river and the Taurus mountains. By far the greater number were in the western half of the country. The most important temples are at Aizani and Aphrodisias.

[1]Teos, Halicarnassus, Magnesia (Mæander), Telmissos, Termessus, Sillyon, Aspendus, Aizani, Aphrodisias and Sardis are not described in the Report, as I was not able to visit them.—T. F.

From what has been done on some of the more remote sites alone, between the first publication of the *Antiquities of Ionia* in 1769 and Niemann and Petersen's book on Pamphylia and Pisidia in 1892, it is obvious that there are untold possibilities in Asia Minor for architectural and archæological research; and apart from the recording of available material, systematic excavation in Turkey has only been carried out on some of the more famous or more approachable sites.

Izmir (Smyrna), both for accessibility and for travelling facilities, is now the most convenient general centre for the coastal region of south-western Asia Minor. The road from it, going northwards, is near the sea, crossing the Hermus river on the way, for most of the 60 miles to Bergama (Pergamum). The railway going south cuts across the Smyrna peninsula, with monotonous hills on the seaward side. Beyond Selchouk (the station for Ephesus) it proceeds for several miles through delightful hill country, parallel with a tributary of the Ephesus river and full of Roman remains. Magnesia is passed, quite close. Finally, we emerge, with a feeling of exhilaration, into a wide, smiling, open country, bounded by distant blue hills, but seemingly extensive as the eye can reach in a south-easterly direction. This is the plain of the Mæander, which extends for about 200 miles from its source in the Anatolian plateau to its sea-ending at Miletus. It runs in a north-easterly direction for the last 30 miles from the sea, varying from five to eight miles in width, absolutely flat, with cultivated and pasture land which is very green in the spring. The best local centre for the ancient sites is Söke, a town of some 10,000 inhabitants and the seat of a Kaimakam. It is the terminus of a branch line from Selchouk, has important liquorice works, and is situated in a healthy position on the north side of the plain, four miles east of Priene.

Priene

Of the three great Hellenistic sites near the mouth of the Mæander, Priene has the finest natural situation. It is on the northward slope bounding the plain and consists of a series of terraces, partly artificial, approachable from both ends, but more readily from the east. The forming of these necessitated stone retaining walls of considerable height and length, particularly for the lowest stage containing the gymnasium and the stadium, some distance below the rest of the town and with a steep slope intervening. The intermediate stage is the widest flat space and contains the spacious agora, with the council chamber (*ecclesiasterion*) rising above it on the next slope. The top slope contains a large part of the domestic quarter, the theatre—at the back, in a slope rising behind a dip—and the dominating feature of the whole of Priene, the platform of the Temple of Athena with its stone retaining walls on west and south sides. The main street runs east and west, and where it reaches the temple platform slopes downwards rather steeply to the

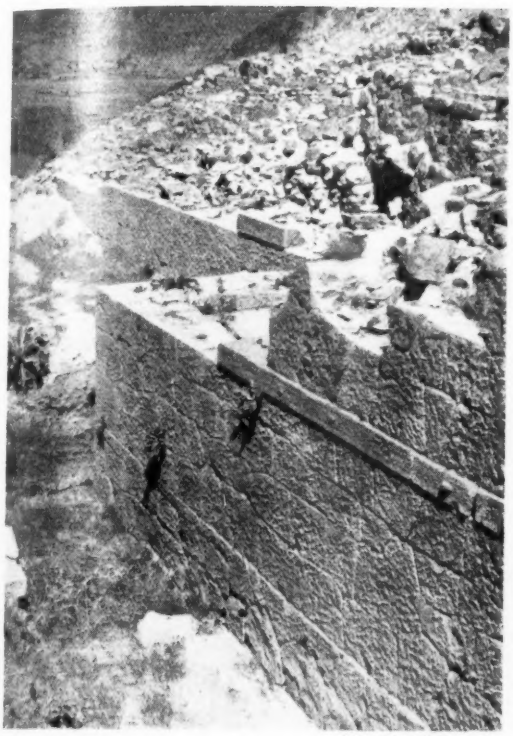


Photo: Mr. Robert Cook

Above, left: LARISSA, NEAR SMYRNA. Polygonal wall of Archaic Greek period.

Above, right: DIDYMA. Temple of Apollo. North end.

Below: PRIENE. Proskenion (*scena*) of theatre.

western gate. From every point of view—from the east on the gradual ascent, from the agora and stadium, and from the temple platform with its superb view towards the plain and the western sea—Priene is one of the most beautifully placed and arranged sites in the Mediterranean, worthy of the temple which was, perhaps, the most perfect Ionic structure of the Hellenistic Age. Its date is placed at about 330 B.C.

Priene was a comparatively small centre, but no Greek site is so easy to understand, and contains such perfect evidences of all aspects of Greek life. The theatre is correspondingly small and the upper half of its seating has disappeared, but from it one can still imagine what the whole of the Greek theatre meant. The *ecclesiasterion* and the compartment of the gymnasium with the washing-basins, are nearly as perfect. The big retaining walls of the lowest stage of the site, with their fine evidences of gates, are worthy of careful study for their construction.

Miletus

The situation of Miletus is very different from that of Priene. It lies at the western end of the plain, a short distance from the south bank of the Mæander, here a broad, slow-moving river about 70 yards wide. The whole of this area is difficult to understand to-day without prolonged study and full knowledge of the original facts. When Miletus, which is on a slight rise, was first built, it jutted out into the sea as a peninsula having a narrow neck to connect it with the mainland.[1] The most impressive thing on the site is the theatre, which had no hill-backing and was constructed as an architectural monument from the ground. The great side bastions of the structure with their semi-circular doorways and with narrow and wide courses of masonry alternating, indicate Hellenistic work of the Roman period. The vaulted corridors and staircases are most impressive, in keeping with one of the largest and most ambitious of the classical theatres.

The remains of Miletus are scattered over a wide area, and a site that is on a series of undulating flats in the middle of a great plain is apt to be bewildering. It would be impossible, without great expense, to keep such a site in order, and the going is arduous in places. The fragments lying about, illustrating all periods of Greek and Hellenistic architecture, would fill a museum; and many of them are very interesting.

Didyma

One goes to Didyma by the north bank of the Mæander from Söke (passing Priene high up on the right), crossing the river by a ferry, going through the village of Miletus, and travelling for some miles through hilly country parallel with the coast. Turning slightly inland, the Didymaion appears on a low hill with cypress trees. The modern village partly obscures it, but originally it must have commanded an inlet of the sea, now some two miles distant. The west front of the temple faced the sea.

The Temple of Apollo Didymæus is the most important early Hellenistic monument in existence. Its commencement marks the end of the great building period of the latter half of the fourth century B.C., which included Priene, Sardis, the later Artemiseion at Ephesus and the Mausoleum at Halicarnassus. It is true that Didyma was not finished till Roman times, though all of it can be called Hellenistic.

The cella of the Didymaion was a deep well, open to the sky, with a high podium and a pilaster treatment above it. The podium was necessary as a return to the grandiose stepway at the east end and its two side bastions. The bastions are in reality hollow and contain the lower of two cleverly constructed ways-up on each side; these lower ones being sloped passageways with stone-vaulted ceilings, and the upper ones being staircases with large-scale fret patterns in flat relief on the ceilings. The lower passageways lead up through small doorways in the front of the bastions, to the pronaos. The stairs have no connection with them, but lead to the upper structure of the temple-end from the raised "vestibule" above the pronaos. Except for the fine fret pattern, the weakness of this motive is its small scale in relation to the rest of the temple. The box-like bastions with small doors are ingenious but unreal and trifling. The architect was, in fact, attempting something that was almost incapable of solution; and it was not repeated. The more orthodox arrangement of the cella as a hall slightly raised above the peristyle, offered opportunity for the later Syrian treatments (particularly the grand "baroque" one at the north end of the Bel Temple at Palmyra) which are so interesting in relation to sanctuary treatments in the Christian church.

Nevertheless, the scale of the Didymaion as a whole is immense, and it is splendidly kept throughout except for this matter of the staircase bastions. Actual sizes are very great, yet the handling of the marble shows both vigour and delicacy. The sloped passageways from the vestibule to the cella are splendidly masoned. The simple wall-moulding below the flat ceiling in the upper stairs was coloured red. The interspaces of the fret pattern were coloured blue. The frets may have been black.

The architraves of the great door are more normally classic than those of the Syrian doorways, but the front and back vary in treatment. They are built in the Greek manner, as posts of marble, existing on one side to a height of 14 feet. Such enormous blocks—these are 3 feet 8¾ inches wide and about 7 feet deep—follow the tradition of the Athenian Propylæa. At Baalbek, the elaborately carved architraves of the great doorway between the courts are built in courses, though they are exceptionally large ones.

Ephesus

The first break, towards the sea, in the confined valley running south from Smyrna, is the plain on which ancient Ephesus was placed. It is roughly about three-quarters of a

[1] See A. von Gerkan—*Griechische Städteanlagen* (Berlin and Leipzig, 1924).

DIDYMA. Temple of Apollo. Column base at east end

mile wide, north to south, and two miles long, east to west. It is nearly always marshy in places, particularly at the seaward end, where, in early days, the mouth of the River Cäister expanded into a lake, which formed the inner port of the city. The plain is partially closed at its higher, landward end by an isolated massif, the highest spur of which rises steeply. Farther down the plain, on its south side, was a hill which jutted into it and formed a screen for the inner port. The Artemiseion was grandly placed in the higher part of the plain, inland from the jutting-out hill. On the seaward side of this hill was the Hellenistic city. The site has many attractive features. The view looking inland from the higher slopes of the city is romantic and the site of the Artemiseion itself is impressive; but one realises how difficult it would be for even a great building to hold its own in such surroundings.

The Hellenistic city of Ephesus probably owed its existence very largely to Lysimachos, who held complete sway over much of western Asia Minor at its most vital time—the beginning of the third century B.C. The whole site is well worth careful study, and as its main north to south street has now been properly cleared, the values of the two sections of the city—one on the plain and the other on the slope—can be apprehended without difficulty. A great deal has been done in tidying up, but many fragments could still be removed to the museum at Smyrna with advantage.

Turning now to the Artemiseion, one must realise that in its original condition it stood on a great platform, with a processional way proceeding from its western front towards the sea-gate. With its vast precinct, it might have dominated the landward end of the plain with a reasonable measure of success; having, as a background, the picturesque rising ground on which the modern town of Selchouk now stands. Nothing is visible of the great platform. In winter the site must be mostly under water. All this sounds disappointing, but there is a great deal that repays examination, and the site itself seems to stand out more clearly if some time is spent there.

Belevi

The interesting Mausoleum which has been revealed at Belevi is about 20 miles from Selchouk (Ephesus), in a direction east of north, on the ancient route to Sardis.

EPHESUS. General view of Hellenistic City, east side

The site is on rising ground at the edge of a quiet wooded valley overlooking a considerable lake. A mass of rock, roughly rectangular, forms the basis of the structure. It was faced with dressed stone down to a moulded base-course standing on a stylobate of three grades. The podium being arranged in this way, there was an upper structure founded on the top of the rock, consisting of a cella (in all probability) surrounded by a colonnade, and carrying, presumably, a wooden roof or a pyramidal one of stone. At the rear of the podium is a high, narrow chamber, in an enlarged cleft of the rock, containing the stone sarcophagi. One of these still remains in a good state of preservation, with its recumbent figure.

It is probable that the podium was topped with a Hellenistic Doric entablature and that the order of the peristyle above was proto-Corinthian. Dr. Josef Keil, who is directing the work, has already published a tentative restoration on these lines, but I understand that it does not entirely represent his latest conclusions. Dr. Keil has also most admirably assembled together, on the site, the fragmentary elements of the two entablatures. The details throughout are extremely interesting and the base-courses of the podium, in particular, offer valuable comparative material for the Mausoleum at Halicarnassus. Even more important is the comparative data that will be made available for the heights—actual and relative—of the podium and superstructure in relation to the plan dimensions of the monument.

In the absence of inscriptions it is impossible, at present, to have any exact knowledge about the builders or date of the Belevi monument. From the purity of the details it would appear to me to be of the third century B.C. I understand that this is also Dr. Keil's conclusion.

Pergamum

The siting of Pergamum is a complete contrast to that of Antioch and Alexandria, which are both on the level. Pergamum was a fortress site, placed on a high hill which is entirely isolated and which has a crowning eminence forming a level plateau, generally from north to south, but with steep declivities all round. The main mass of the hill is also very steep on its south side, and it is on this side that the lower part of the Hellenistic city was placed. Between this lower part—which contained the Gymnasium and the Demeter Sanctuary—and the upper city, there is a considerable intervening space of ground which rises gently. On this, the general residential part of the town was situated, but it has not yet been excavated. The upper city was the kernel of the whole site, containing, in order of level, the Market, the Zeus Altar, the Library, the Athena Temple, the Trajaneum (Roman) and the topmost buildings—the magazines for the storage of grain and munitions, and possibly, the Queen's Garden. Combining the centre of this group of buildings on the west side is the Theatre and the long walk leading to the Dionysus (later, Caracalla) Temple. There was, undoubtedly, a palace in this upper city and there was also a palace in the lower city to the east of the

BELEVI, NEAR EPHESUS
Proto-Corinthian capital from Mausoleum

Gymnasium. This lower palace was excavated by Wiegand and others about five years ago, together with the magazines of the upper city. The remainder of the site was excavated by Humann, Conze, Dorpfeld and others, from 1869 till well into the present century.

The enclosing walls of this great site are now mostly of Roman date in their upper portions, though earlier masonry is generally visible below throughout, but the precipitous declivity of the upper city on the north-west has a splendid untouched length of Hellenistic retaining wall, the lower part of which is stepped in slightly projecting regular stages, the upper part being vertical. The whole wall is about 45 to 50 feet high. There is also some Hellenistic buttressed walling to the Gymnasium in the lower city. In some of the substructures there are semi-circular finely built vaults of the second Pergamene period, to which period also belongs the Zeus Altar.[1]

[1] In these notes, no exact differentiation of period has been attempted. Hellenistic Pergamum was mainly the creation of Attalos I (241–197 B.C.) and Eumenes II (197–159 B.C.). The art epochs of these sovereigns are termed, respectively, the first and second Pergamene periods.

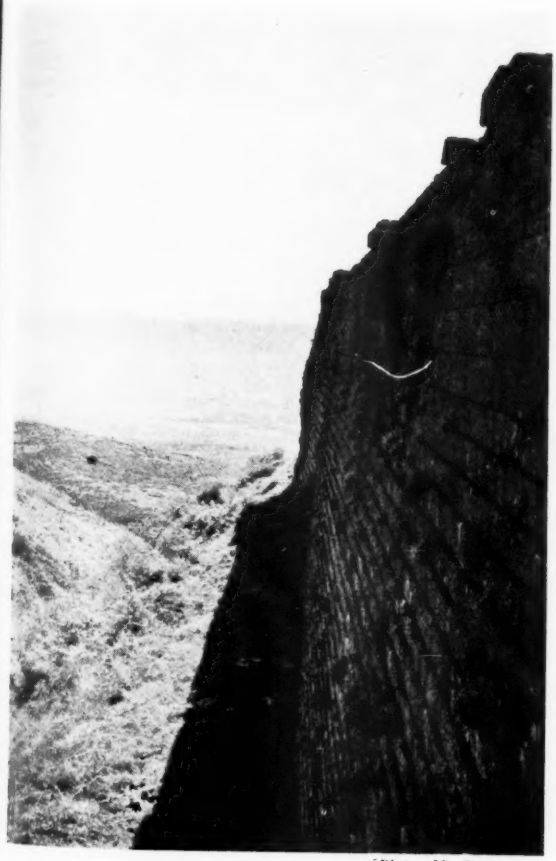
[Photo: Mr. Robert Cook

PERGAMUM.

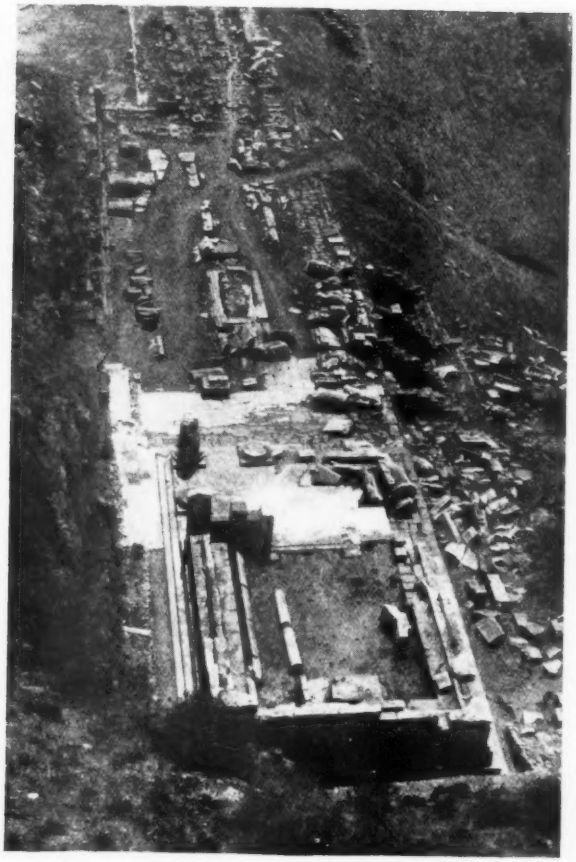
To the left: General view of the site.

Below, to the left: Retaining Wall of upper citadel.

To the right: Dionysos Temple, terrace and theatre.



[Photo: Mr. Robert Cook



The treatment of the whole site is masterly. Though the buildings are not all of one period, the lay-out suggests the grasp of a single mind. The designer did not sacrifice effect to parallelism. He recognised the essential truth that sense of direction is lost when a steep irregular hill is being ascended and when—as in this case—it was necessary to follow a winding road to reach the top. The Theatre, forming a great hemicycle in the hillside about the centre of the terrace leading to the Dionysus Temple, gives it width and air-space, without detracting from the dignity of the temple itself, placed at the north end at the top of a great flight of steps. The view from the terrace is superb, but it is clear that in Hellenistic times this view was closed and that a colonnade, backed by a wall, ran along the whole of its western side. The way in which the Theatre *scena* could be erected and removed when not required shows boldness and ingenuity. When the Theatre was in use, this scenery projected about two-thirds across the terrace. The square holes with wide square sinkings around them show that removable wooden posts must have been used for the scenery and that when these were removed, the terrace floor was rendered intact by placing covers of square stone slabs over the sinkings.

The great group of buildings that were directly associated with the terrace and the theatre consisted of the Zeus Altar, the Library and the Athena Temple precinct. The largest of these features was the precinct of the Zeus Altar, which faced almost directly west, but which was associated with the southern end of the temple terrace. Below the altar precinct on the south was the Market, and above it, on the north, was the Library. This latter building contained in its front the two-storeyed arrangement with balustrades treated in relief, which is so familiar.[1] As seen to-day the Library shows a terrace backed by finely built stone alcoves.

* * *

The Asklepieion is situated on high ground above the modern town about a mile from the Hellenistic city. It is now being finally cleared up and recorded for the publication of fully-studied drawings, and Herr Hanson, the architect director, was working on this.[2] It is a very important complex of buildings with a noble court, which is valuable architecturally as Roman work, as well as for full knowledge of the remarkable healing cult arrangements.

Apparently the Asklepieion had a dome like the Pantheon, but smaller. The interesting building beside it had a lower storey with alcoves all round and compartments for the patients to sleep in. The upper storey had a wooden roof.

[1] See Collignon's *Pergâme*.

[2] For the preliminary publication, see *Zweiter Bericht uber die Ausgrabungen in Pergamon, 1928–32: Das Asklepieion*, by Theodor Wiegand. (Berlin, 1932.) Herr Hanson's personal guidance over this site and over the Hellenistic city was invaluable.

ATHENS

Athenian Agora excavations and Theseion, from the Areopagno

GREECE AND THE ÆGEAN ISLANDS

Greece, the prime source of classical form, was affected but slightly by its later development. Athens was favoured largely by Macedonians, Attalids, Seleucids and Ptolemies—lastly, by Rome also—in the third, second and first centuries B.C. It absorbed what they gave, sometimes even in self-defence. Similarly, the great cult centres of Delphi and Eleusis were still venerated and held their own, in the main; but we find few Hellenistic cities in Greece or the Cyclades. We do not find them either in Magna Grecia or Sicily, unless we include Pompeii and Herculaneum. Soluntum, near Palermo, was an exception. The purely Greek centres that show the most important transformations are Delos and Corinth. Like most Greek sites that are being completely overhauled, they reveal the complex requirements and luxury of later Hellenistic and Roman times, sometimes overlaid on Greek structure, with the mass of copyistic work in marble statuary that takes up three-fourths of the sculptural department of every classical museum. This does not mean that a lot of the material is not worth careful study. It increases our knowledge of the work of the fine Greek and Hellenistic periods. Some Roman copies are very good; others are very bad. To realise the best in the third, second and first centuries B.C., just as in the first to the third centuries A.D., one must study the original works and fine copies, such as the twisting Satyr boy in the Terme Museum in Rome.

Delos

If Priene is the most perfect early Hellenistic site, Delos is certainly the most complete late one. It is stamped all over with the second century B.C. Its situation is beautiful but extraordinary. A site nearer the sea it would be impossible to imagine. It is right on the sea, but that is only a narrow passage between a small island and the shore. Over this island, and quite near, the horizon is bounded by the other (great) Delos. Tenos rises high in the distance on the left. As the site faces west, and there is rising ground behind it and on both sides of it, it is sufficiently protected from strong winds, particularly from the south-west

The wealth of material on the lower site at Delos is amazing and its long lines of stylobate are dominating, when seen from the east (*i.e.*, towards the upper town). These long lines, running principally north and south, are furnished by the "Sanctuary of the Bulls," the Little Forum and the Portico of Philip. The general impression of rectangular lay-out is continued on the north by the temple sites, the Portico of Antigonus Gonatas and the large Agora of the Italians. Still farther to the north and closing the vista, can be seen, on rising ground, the columns of the Palæstra and the Poseidoniastes. Amidst this general impression of Hellenistic splendour, two archaic evidences stand out distinctly In the heart of the temple area the two great fragments of the colossal statue of Apollo rise like rocks. Farther to the north, the fine lions of the ancient way to the Sacred Lake are clearly visible from almost any viewpoint.

The upper town to the south-east is just as impressive as the lower. Taking it as one broad group—though it has several sections—we see the principal residential quarter, with the high columns of the "House of Dionysus" as its principal focal point. Farther up, on the slopes of Mount Cynthos, is the horizontal line formed by the terrace in front of the temples of the eastern deities—Syrian and Egyptian—dominated by the distyle-in-antis pedimented front of the Isis Temple. Still farther up, on the ridge of the mountain, is the site of the Temple of Athena Cynthe, with a fine view eastwards to the Island of Mykonos, the usual centre for visiting Delos.

All of this main part, impressive as it is in extent, by no means constitutes the whole. On the extreme south, along the shore, are the quays of the merchants, with extensive remains of the warehouses and shops which had direct frontage to the sea. To the extreme north, removed from the sea on the other side of the rising ground beside the sacred lake, are a large middle-class residential quarter, the Gymnasium and the Stadium. The Theatre, with very fine supporting walls for the seats on

DELOS
Temple of Isis

its north side, is tucked away behind the main southern residential quarter. The entire length of the area covered by these remains is about 1½ kilometres, and its width three-quarters of a kilometre.

Delos is pre-eminently the home of Hellenistic Doric. Its slender, sometimes attenuated, evidences can be seen all over the residential quarter. The Delian house plan was distinctive and characteristic, though it has some resemblances to the Palmyrene type.[1] Broadly speaking, the larger type of house has a central peristyle court which was surrounded by rooms. The court was one step down and was paved with plain mosaic in large tesseræ or with stone slabs. Below it was the large underground stone cistern for rain-water with a circular draw-off giving access to it. The floor of the court had, therefore, to be supported to a great extent over a void. Either arched constructions of stone or heavy wood beams were employed. The floors of the surrounding peristyle and of the rooms were also of mosaic, the finest being in the rooms, which were often elaborately decorated. The walls were finished with coloured stucco on a rubble backing, very much in the Cretan manner, but more architectonic. The general scheme of decoration was a skirting in red colour, a dado representing large slabs of stone or marble, a dado-band, usually projecting, and an upper scheme of imitation masonry. In the finest example this was all very delicately worked out, with a true feeling for the limitations and possibilities of plaster-work. Doorways—thresholds, jambs and lintols—were usually of marble, sometimes finely moulded. The columns of the peristyles were either of stucco on a core of stone, or of marble. Many of the columns are standing complete, but there are no entablatures in position.

The Delian houses are so important and so complete, that it is profitable to compare them with those of Herculaneum and to consider the practical value of both types in relation to modern work. In the earlier (Hellenistic) Delian houses the mosaic floors, where not plain, were enriched by coloured mosaic, which, in the best examples, becomes fully pictorial. In the later (Roman first century B.C. or A.D.) houses at Herculaneum the enriched floors were either of black and white mosaic or, more rarely, of coloured marble pieces, and there is less tendency to elaborate pictorial work. At Herculaneum, on the other hand, the wall treatments, where not plain, were treated pictorially, as polychrome work; in contradistinction to Delos, where all wall finishes were treated in purely architectonic terms, with colour schemes that were appropriate to the materials imitated. Both of these types of house aimed at a permanent finish for all interior surfaces. No ceilings exist in either type, but it is practically certain that they were of plaster except where, at Herculaneum, they were vaulted or semi-domed. In such cases, mosaic might have been employed. It is this matter of a permanent finish which makes both of the ancient types most interesting, practically, to the modern architect. Admittedly the tendency of modern work is to secure permanence of finish in interior surfaces.

Delos has already been very fully, though not completely, excavated by the French, and the publication of the resulting material is nearing completion. A small excavation was in progress in the summer of 1934.[2]

Corinth

One is immediately struck with the vast area of the site and the amount that has been done by the Americans, especially in the last few years. The situation is superb, right under the Acro-Corinth, a most impressive thing in itself. To the west and north there are wide prospects over the Gulf of Corinth and the hills of Greece. Dominating the whole is the archaic temple, grand in scale, and dwarfing everything else in size from three miles away.

CORINTH
Main street on east side of site

The results of the excavations, very nearly to date, are admirably described, with a fine accompanying plan, in the Museum Guide Book, written by Dr. Rhys Carpenter.

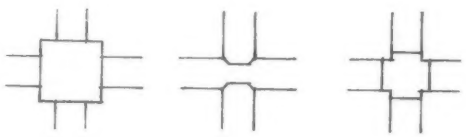
[1] For the houses, see particularly Vol. VIII of the French publications. For the Palmyrene houses, see A. Gabriel—*Recherches Archéologiques a Palmyre*—(Extract from the Review, *Syria*, Paris, 1926).

[2] *Delos, I–XIV.* Ecole Françaises d'Athènes, 1909-1933. (Paris: de Boccard, Editeur.) For a vivid picture of social, economic and religious aspects of Delian life during the ultimate phase of Athenian occupation in the last half of the second century B.C., see *Hellenistic Athens*, by W. S. Ferguson (Macmillan, 1911). A. Laidlaw, *A History of Delos* (Oxford, 1933), gives a useful picture of the whole period.

late Director of the American School at Athens[1]; but Dr. Broneer, who is now directing the excavations, has since investigated further the great Stoa on the south of the site. It was known previously that this had the amazing length of 165 metres (nearly 550 feet), but its double portico—the front columns Doric, the rear columns Ionic—has now been found to give on to a row of 33 shops, each with a rear chamber, so that there are 66 chambers in all. The water arrangements in these shops are extremely interesting. Each front shop had a square well-pit about 11 metres deep, at the back of which was a continuous longitudinal water channel, constantly supplied with running water from the famous Peirene spring, still functioning. The water channel had a cross connection to each well-pit. As this is a unique arrangement, and as it was not usual for Greek buildings to be supplied with drinking water in this way, Dr. Broneer advances the opinion—which seems a very sound one—that the well-pits were used for cold storage. It is probable that the rear chambers of the shops were store-rooms.

This Stoa was originally Greek, but probably Greek of the fourth century B.C. at the earliest. Some of the lower walling may go back to that period, though the pottery and coins mostly point to the third century. The Romans altered and remodelled the original plan to some extent, but not very greatly. It is certainly Greek in essence.

An interesting point of constructional detail was pointed out to me by Dr. Broneer. In the intermediate wall of the shops, remarkable provision was made against earthquakes in the disposition of the walling stones at the junctions of the cross-walls. This can be explained by the diagrams annexed, which illustrate the plans of three successive wall-courses.



ITALY AND SICILY

Herculaneum

The situation of Herculaneum is different from that of Pompeii. It lies immediately above the seashore on a gentle and continuous rise which ends at the first slopes of Vesuvius. The front of the town was a raised terrace protected against the sea after the manner of a mediæval moat; and on this terrace lay the finest houses. The lay-out is thus very simple, the most notable exceptions to the mass of smaller houses behind the patrician front being the large and high *Casa Sannitica*, and the baths for young men with their "palæstra" (columned court-yard) in front of them.

All of the patrician houses—(the *Casa del' Argo*, the *Casa dell' Atrio e Mosaico*, the *Casa dei Cervi*)—show striking characteristics which differentiate them from Pompeian houses, but indeed the prevailing house of any size at Herculaneum has this difference. The houses are not narrow and deep, as are most of those at Pompeii, but more square. The peristyle court leading to the atrium is practically non-existent. Many of the smaller houses have their bedrooms upstairs. In short, the houses are essentially Greek in type and not Roman.

Brick, covered with stucco, is the prevailing building material at Herculaneum. It is used for circular columns and for all plain features, but not for ornamental features like cornices, as at Ostia.

A matter of exceptional interest at Pompeii and Herculaneum is the great beauty of the finest type of bed, a wood frame from 15 inches to 28 inches off the floor, supported on bronze legs, elaborately moulded, and with superb bronze side enrichments to the wooden pillow. The whole outlook here is quite Greek and the workmanship can only be paralleled by bronzes of the fourth century B.C. in museums. Another point of great interest at Herculaneum is the existence of a perfectly preserved framed and panelled double door, each leaf having two panels with broad flat mitred mouldings. There is a small bronze ring-handle in the centre of each lock-rail. Except that all the rails are the same width as the styles (about $3\frac{1}{2}$ inches) this might be a Georgian door.

Soluntum

Situated about 10 miles to the east of Palermo, and therefore easily accessible, Soluntum is worth visiting for its site alone, which is about 700 feet above sea-level on steeply sloping ground near the coast. The view eastwards towards Cefalù is striking, and on a clear day Etna is visible in the far distance. The evidences are of Roman date, but the details are quite clearly of Hellenistic character. The main paved street running north and south forms a fine terrace walk on the traverse of the hill slope. It is crossed by a main east to west street going a considerable distance down the hill and a shorter distance uphill. The only standing material except groundworks is at two adjacent sides of what was originally the peristyle of one of the important houses. In this, the detail of the Hellenistic Doric order is fresh and interesting. Even more interesting are the fragments of engaged columns with solid screen balustrades between them, evidently from an upper storey.

[1] *Ancient Corinth. A Guide to the Excavations*. Second edition, by Rhys Carpenter. Paper cover, with loose map. American School of Classical Studies at Athens. 1933. 70 drachmas. For the full publication, still proceeding, see *Corinth*, Vols. I–X. (Harvard Press, Camb., Mass., 1932.)

ACKNOWLEDGMENTS

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A particular word should be said in gratitude for the facilities offered by the British School at Athens to all architectural students and research workers who are privileged to live in its Hostel. Study in its superb Macmillan Library is a delight. I offer my best thanks to the Director (Mr. Humphry Payne), to Mr. and Mrs. R. J. H. Jenkins and others who gave me a very pleasant social environment in addition to much practical help and guidance.

[*Photo: Mr. G. W. Horsfield*

PALMYRA
Temple of Bel. Architrave of west doorway

Review of Practice

THE SHOPS ACT

The following article is reprinted, by permission of the Chartered Surveyors' Institution, from their Journal. It draws attention to a number of details of the new Shops Act which directly affect architects no less than surveyors

THE SHOPS ACT, 1934

BY W. STANLEY EDGSON, CHARTERED SURVEYOR

I have been asked if the Shops Act, 1934 (24 and 25 Geo. 5, Ch. 42), affects us in any way as Chartered Surveyors. Perhaps it may be of interest to members if those of its provisions which more directly concern us are briefly elucidated.

The Act comes into force on 30 December, and its main objects are :—

(*a*) To control the hours of employment of shop assistants under the age of 18 (Sections 1-10) ;

(*b*) To ensure adequate ventilation, heating, sanitation, and lighting, and also washing and eating facilities, to every shop (Sections 10 and 11).

The first part does not really concern the surveyor. Briefly, 48 working hours per week is the maximum, with power to extend for overtime on occasions of seasonal or exceptional pressure only for those between 16 and 18 years of age. This overtime not to exceed 12 hours in any one week, extend for more than 6 weeks, or exceed 50 hours in any one year. To prevent night employment a "young person" shall be allowed an interval each day of at least 11 consecutive hours, which shall include from 10 p.m. until 6 a.m. Boys delivering milk, bread or newspapers may start work at 5 a.m.

There are special provisions applicable to the catering trade and shops for the sale of accessories for aeroplanes, motor-cars and bicycles, also for those working on the stage. Records are to be kept by an employer of the working hours, rest, meal times, and overtime of every young person employed. Section 1 of the Shops Act, 1912, is incorporated so as to provide for a weekly half-holiday and intervals for meals.

The second part requires closer examination.

Section 10 enacts that "in every part of a shop in which persons are employed" (age has no bearing) there shall be provided and maintained suitable and sufficient—

ss. (*1*) (*a*) Means of ventilation ;
(*b*) Means to maintain a reasonable temperature;
ss. (*2*) Sanitary conveniences available for use;
ss. (*3*) Means of lighting;
ss. (*4*) Washing facilities available for use;
ss. (*5*) Where employees take any meals—facilities for the taking of those meals.

ss. (*6*) A certificate of exemption from Sub-sections (2) or 4), as above, may be granted by the authority whose duty it is to enforce these provisions, which certificate shall remain in force until withdrawn. The authority must be satisfied that, by reason of restricted accommodation, or other special circumstances, such a certificate is reasonable, and that sanitary conveniences or washing facilities are otherwise conveniently available, and they shall withdraw exemption if at any time they cease to be so satisfied. An aggrieved occupier may appeal to the County Court against any such withdrawal.

ss. (*7*) In the case of a contravention of these provisions the authority shall serve on the *owner or occupier* a notice requiring him to take, within the notified time, such action as they specify for securing compliance. If the person so served fails to comply with the notice, he shall be liable on summary conviction to a fine not exceeding £20 for the first conviction, and £50 and £5 per day for a second or subsequent conviction.

It shall be a defence to any proceedings if it can be proved that there was no contravention, or that the requirements of any such notice were complied with within a reasonable time after the service of the notice.

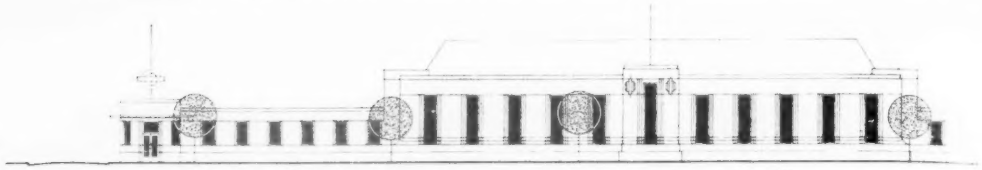
Section 11.

If any person, being *either the owner or the occupier*, who has incurred or is about to incur any expense in complying with Section 10, alleges that the whole or any part of the expense ought to be borne by any other person having an interest in the premises, he may apply to the County Court who may make an order as to these expenses or their apportionment, having regard to all the circumstances, including the terms of any contract for tenancy. Any such order may direct that the contract of tenancy shall cease to have effect in so far as it is inconsistent with the terms of the order.

The "authority" is the Sanitary Authority under the Public Health Acts. It is their duty to enforce the provisions of the Act, and any inspector shall have, in relation to shops, all the powers conferred in respect to factories and workshops by Section 119 of the Factory and Workshop Act, 1901 (1 Edw. 7, c. 22).

"Shop" means any premises where any retail trade or business is carried on, and includes the business of a barber and hairdresser, the sale of refreshments and intoxicating liquors, and retail sales by auction, and any wholesale shop or warehouse occupied by any person carrying on any retail trade or business or by any wholesale dealer or merchant.

The Act extends to Scotland but not to Northern Ireland.



Elevation to the street of the proposed garage and passenger station at St. Albans

MOTOR COACH GARAGES NEAR LONDON

Architects: Wallis, Gilbert and Partners [F., A. and L.]

These garages are some of a number at present being built or projected for the London Passenger Transport Board in towns adjacent to London. They are used to house motor coaches and omnibuses and to undertake maintenance work and the usual running repairs. The planning and detail design follow standardised lines but are varied to suit requirements of site and also to pay attention to the amenities of the various towns in which they are situated.

In some cases the garages are situated on "back land" and approached from the streets by private roadways. In others, public shelters and conveniences are incorporated so that the buildings may be used as coach termini by passengers. Where this is the case they are usually built on street frontages.

CONSTRUCTION

The first requirement in construction is that there shall be no free-standing stanchions whatever. To fulfil this a "butterfly" type of roof is used consisting of steel lattice girders over the complete span, which in turn support triangular cantilevers, the whole forming a series of pitched roofs with horizontal valleys. This is shown in diagram form on page 378, though it should be realised that this diagram explains the principle only. In practice, stiffening stanchions are provided at the ends of the cantilevers round the walls and also at the ends of the valley girders. The roofs are partially glazed, the remainder being covered with a light roofing such as dark red asbestos sheet. In some cases false steeply-pitched roof slopes, covered with plain tiles, are provided on the street fronts to conceal the asbestos sheeting and glass.

The walls are 11 inch cavity faced externally with dark red facing bricks and internally with fair-faced work in flettons, which is painted. In some of the later garages a glazed brick dado is provided inside. The steelwork is coated with cement slurry where it is built in.

The foundations consist of isolated piers. The stanchions are extended well down into the foundations and the walls between them are carried on concrete cased R.S.J.'s. The spans between stanchions are halved by concrete piers, so that alternate piers only of the foundations contain stanchions.

The floor is of reinforced concrete slabs with expansion joints, the whole being laid to falls to a single trench running across the building. This trench is covered with steel mesh and acts as a settling tank in which the mud

Epping garage is in "back land" approached from the main street by an access road. The roof is partly glazed and partly covered with dark red asbestos sheet

A detail view of Epping garage showing the hand-operated folding doors with exterior lights at the top corners. The brickwork is in facing bricks, the plinth is white cement rendering and the bollards painted concrete. Below is a plan which shows the provision for extension on the west side. This garage normally houses 27 coaches, and has a maximum capacity of 35

from coach washing is deposited. It is large enough to be cleaned out with a shovel.

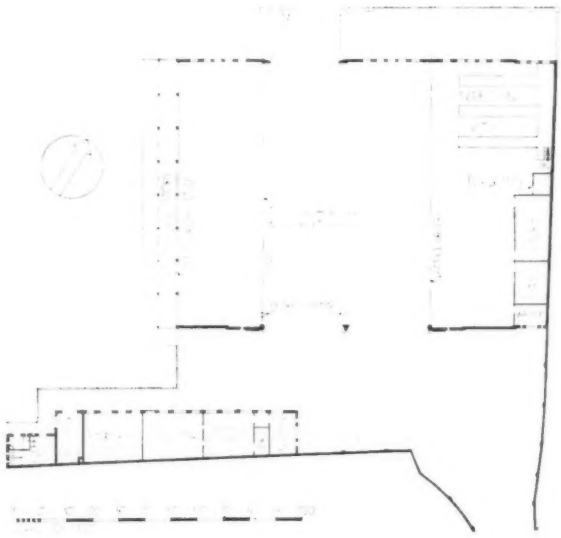
The general construction allows easy extension by the addition of another roof bay. Some of the garages have temporary walls on one side to allow this to be done.

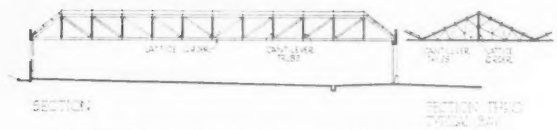
USE OF THE BUILDING

Generally the coaches come in late at night and go out again early in the morning. They are not out of service long enough for the risk of damage by frost to be appreciable; consequently, the building is not fitted with a heating installation. Should a coach be out of service for minor repairs, it is the practice to empty the radiator.

When a coach comes in, the petrol tank is first filled from a pump at the entrance. It is then washed by high pressure hoses hanging from the roof and then turned and backed against the wall ready for going out in the morning. In this position it is cleaned out inside and rubbed over externally.

The mechanical plant consists of a pressure washing machine feeding the overhead hose system, an air compressor for filling air bottles which are carried round to the coaches as required, and a power pump for petrol supply. Internal lighting is by means of overhead points





Sections of the roof steelwork; see also the diagram below

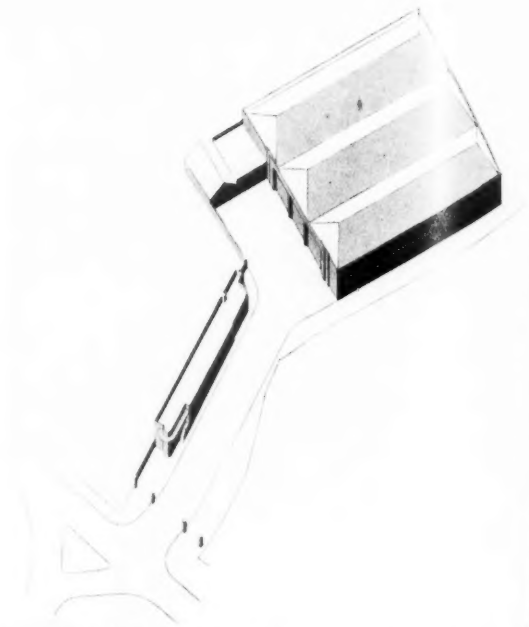
on the steel roof; the external yards and approaches to the doors are also illuminated by projector-type fittings.

REPAIR WORK

The garages are equipped to undertake maintenance work only which, however, includes decarbonisation, taking up of engine bearings, etc. A typical inspection pit installation consists of three or four parallel pits joined at the end by a wide trench, approached by steps, in which are placed benches and tools. The construction of these pits is shown in detail below. They are lined with white glazed brick and are fitted with light fittings recessed in the walls. Plugs for inspection lamps are also provided. The pits are decked over with steel mesh in small easily removable units. A high concrete curb obviates the risk of coaches running on into the trench and there is also a handrail. Lock-up stores for tyres and spares are provided near the pits.

FINISH

While the finish aims principally at giving long service, the general appearance is pleasant by reason of well-chosen materials and colours. The external brickwork has a certain amount of patterning and the bricks are



Axonometric drawing showing the form resulting from the roof construction. This garage is at Hemel Hempstead, and is typical; the plan is on the opposite page

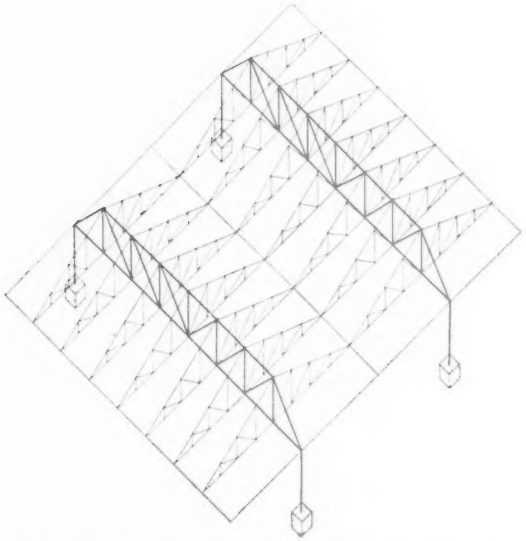
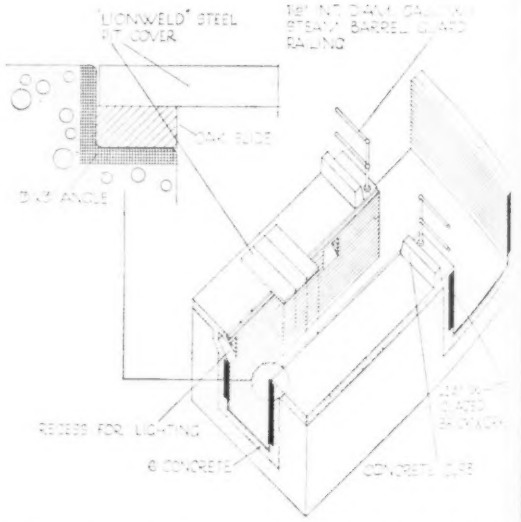
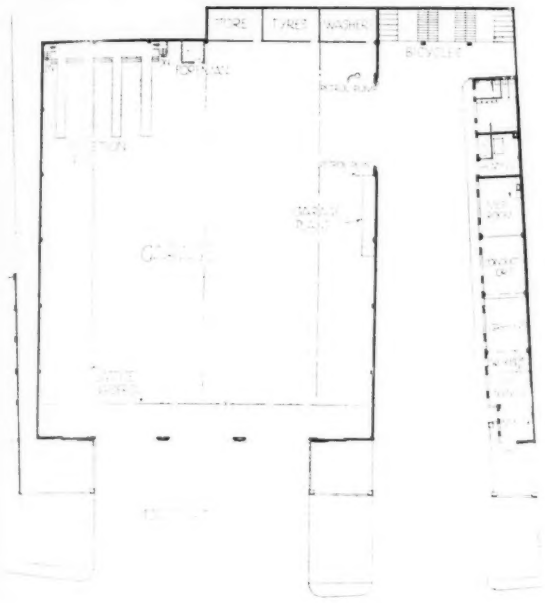


Diagram showing the roof construction. Lattice girders carry cantilever trusses avoiding entirely internal stanchions



Detail of the inspection pits. The pits end in a trench containing benches and tools. For general layout of the pits see the plans



sand-faced facers of good colour. Internally the steelwork is painted the same pleasant light green as the L.P.T.B. coaches, the unplastered brick walls are painted cream with a dado either painted in olive green with black bands or of coloured glazed bricks. The large accordion-type doors, which open easily enough to make provision of a gear not necessary, are usually painted a battleship grey.

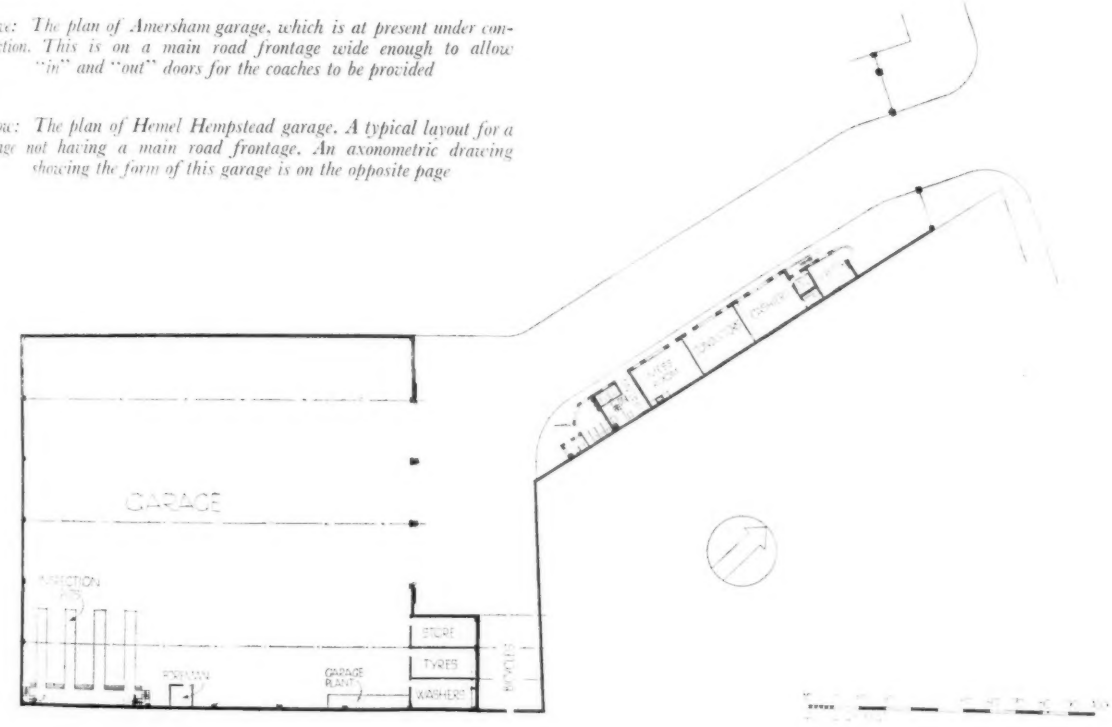
THE OFFICES

The office building is detached from or forms a wing to the main garage block. It is built of 11 inch cavity walls, flat reinforced concrete roofs surfaced with asphalte and steel windows. They consist of offices for the inspectors, district managers and cashiers, with mess rooms and rest rooms for conductors and drivers.

The photographs used here are reproduced with the permission of the London Passenger Transport Board.

Above: The plan of Amersham garage, which is at present under construction. This is on a main road frontage wide enough to allow "in" and "out" doors for the coaches to be provided

Below: The plan of Hemel Hempstead garage. A typical layout for a garage not having a main road frontage. An axonometric drawing showing the form of this garage is on the opposite page



Photograph and plan of the garage at Dorking. This is also a terminus and has waiting accommodation for passengers as well as "in" and "out" doors for the coaches. One side is of temporary construction to permit extension. The high tiled roof is a screen concealing the typical roof construction behind it

Review of Construction and Materials

This series is compiled from all sources contributing technical information of use to architects. These sources are principally the many research bodies, both official and industrial, individual experts and the R.I.B.A. Science Standing Committee. Every effort is made to ensure that the information given shall be as accurate and authoritative as possible. Questions are invited from readers on matters covered by this section; they should be addressed to the Technical Editor.

The following are addresses and telephone numbers which are likely to be of use to those members seeking technical information. There are many other bodies dealing with specialised branches of research whose addresses can be obtained from the Technical Editor. We would remind readers that these bodies exist for the service of Architects and the Building Industry and are always pleased to answer enquiries.

The Director, The Building Research Station, Garston, Nr. Watford, Herts. Telegrams: "Research Phone Watford." Office hours, 9.30 to 5.30. Saturdays 9 to 12.30.

The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks. Telephone: Princes Risborough 101. Telegrams: "Timberlab Princes Risborough." Office hours, 9.15 to 5.30. Saturdays 9.15 to 12.

The Director, The British Standards Institution, 28 Victoria Street, London, S.W.1. Telephone: Victoria 3127 and 3128. Telegrams: "Standards Sowest London." Office hours, 9.30 to 5. Saturdays 9.30 to 12.30.

The Technical Manager, The Building Centre Ltd., 158, New Bond Street, London, W.1. Telephone: Regent 2701, 2705. Office hours, 10 to 6. Saturdays 10 to 1.

THE SEASONING OF TIMBER: IS LONG AIR-SEASONING ESSENTIAL?

By S. T. C. Stillwell, Forest Products Research Laboratory, Princes Risborough

On several occasions the Laboratory has been asked as to whether there is any particular virtue given to timber by air-seasoning over a relatively long period of years.

Although these enquiries, which are the main subject of this note, are concerned with timber no greater than two inches in thickness, it may first be well to mention the seasoning of heavy beams. Timbers of large cross-sectional dimensions, particularly hardwood timbers, may take tens and even hundreds of years before they become dried or seasoned to the centre of their thickness. In such cases, each successive year's seasoning adds to the depth of the surface skin of drier wood and thereby gradually lessens the liability of such timbers to subsequent splitting, warping and other movement, and to infection from fungus. Long seasoning is advantageous, therefore, in the case of large sectioned timbers, for though the early years will be much the more effective in improving their conditions for use there will be a progressive if diminishing effect over a long period of years.

Coming to the question of material two inches or less in thickness, the Laboratory knows of no advantage to the timber of relatively prolonged periods of air-seasoning and considers they are quite unnecessary.

It is true that the period of seasoning may affect the appearance of a wood, by weathering the surface, and in some few species perhaps by a more deep-seated colour change. From the view of the main physical properties of the wood, however, the change in moisture content is the one significant feature of seasoning. From a practical point of view, seasoning and drying, providing the drying is carefully carried out so as to avoid undue internal stressing of the timber, are synonymous terms.

The periods of seasoning mentioned in the enquiries were five years and upwards to over twenty years, far in excess of the time required to dry the timber as far as is possible under air-seasoning conditions. It would be difficult to justify any claim that improvement—or indeed material change—had occurred after the end of the first two or three years, though even so long seasoning as this is quite unnecessary.

Moreover, after five—or say fifty—years' yard storage, whether under good cover or not, timber will not dry below a certain point and will be found insufficiently seasoned for indoor use in any work where shrinkage is a serious drawback. This is due to the fact that the air conditions in a room are drier than those out of doors, and, therefore, further drying of the timber will take place in the room with a consequent loss of dimension in the timber. Further drying, either in a kiln or a warm room, will be necessary to prepare air-seasoned wood for such work, because if the timber is to be reasonably stable in use it must be dried to a degree to suit the drier atmospheric conditions found indoors. If this is done and the drying carried out without damaging or setting up undue stresses inside the timber, success can be ensured.

Timber two inches or less in thickness, which has been air-seasoned for two or more years, can easily be brought to a suitable condition for indoor use, but equally timber, after seasoning for six months or less (according to the species), requires no more than the exercise of a little greater care to bring it just as effectively to the same state. The matter may be carried yet further. Kiln drying freshly sawn as against partly seasoned planks needs considerable experience and knowledge, but again, given proper methods of treatment, there is no reason why they should receive a preliminary air-seasoning at all to prepare them for manufacture and use. Provided that the necessary knowledge is available, the method of drying timber need depend only on cost and convenience.

There has been an idea in the past that long seasoning gives timber additional stability, but recent experiments have shown that the shrinkage and expansion of centuries old timber is no less than that of similar pieces with the same moisure content from recently seasoned timber of the same species.

Unnecessarily long seasoning is obviously bad economy, for it represents space occupied and capital lying idle. It also entails the exercise of care and supervision, for while under good conditions of storage the timber will probably not suffer from keeping, there will be grave possibilities of deterioration from insect or fungus attack if circumstances favourable to their development arise.

COPPER DAMPCOURSES

When this series of articles was started in the JOURNAL *the editors stated that they were prepared to publish agreed summaries of Building Research Station reports on proprietary materials, on application from manufacturers. This offer was made with the intention of encouraging the practice of manufacturers submitting their products to test. There are only two guarantees by which architects can be certain that materials which they have not hitherto tried will perform what is claimed for them. The first is that a material shall be in accordance with a British Standard Specification; the second is that it shall receive the reliable backing of a Building Research Station Report. Below we give a summary of a B.R.S. report on "The Use of Copper as a Damp-proof Course," carried out at the request of the Copper Development Association. The wording of the summary has been agreed by the Director of the Building Research Station and by the Copper Development Association.*

GENERAL REMARKS

After stating that the application of copper for dampcourses is convenient owing to the fact that the metal can be supplied in rolls of 50 feet in length and from 2 inches in width upwards, the Report gives the various sources and tests from which information is drawn.

Other dampcourse materials are then discussed in order to detail the defects to which in varying degrees they are liable, and to state the qualities required of a material for this work. These qualities can be summarised as resistance to fracture from settlement or other movement of the building, resistance to squeezing out under load, resistance to sliding of the upper portions of the walls, and resistance to corrosion by adjacent materials. The Report then continues:

> If a new material of durability equal to that of the slate or blue-brick damp-proof courses were suggested, the decision whether to use it in a particular situation would presumably be made on the basis of cost and convenience. If, on the other hand, the material were thought to be somewhat uncertain with respect to any of the characteristics mentioned, the choice would also involve considerations of probable relative efficiency.
>
> The test methods which could be applied to test damp-proof courses in respect of their liability to certain types of failure would hardly be worth while applying to copper. The elastic range of the metal is long as compared with lead and bitumen, and precludes any possibility of squeezing out under the loads involved in building work: the relatively high tensile strength renders injury from perforation unlikely when copper is used with ordinary care: breakage due to settlement of foundations or movements of brickwork or masonry will probably be less likely than with slates, due to the ductility of the material, and in any case slight cracking does not necessarily involve failure of the course. Tests on permeability would hardly be useful.
>
> The possibility of injury from corrosion would appear to be the only feature which demands examination. In view of the high resistance to corrosion of copper by dilute solutions neither highly acid nor highly alkaline laboratory tests on this question would require considerable time, and the results might be difficult to relate to practical conditions. Practical exposure tests are also open to the objection that a long period of time would be required before anything of value could emerge, and it would be unjustifiable to ban a material which appears extremely promising until a lengthy exposure test had been performed.
>
> The above remarks are not intended to suggest that there is no necessity for tests on corrosion. Such work should be put in hand as soon as possible in order that definite information may be forthcoming in a few years' time.
>
> Unfortunately, in the present case, there are no records available so far as we have discovered of the use of copper as a damp-proof course; its application for the purpose in this country seems to be quite recent.

In the absence of laboratory data, performance tests and practical experience, it is necessary, as a last resort, to fall back upon the only two remaining sources of information, which are:

1. Recorded observations of the behaviour of the metal under conditions comparable with those to which a damp-proof course is exposed.
2. A study of the general physical and mechanical properties of the material.

The possibilities of certain kinds of mechanical injury can be set aside in view of the mechanical properties of the metal, as has already been explained. The possibility of corrosion under the conditions existing in a damp-proof course remains for consideration, and with the object of discovering information under this head a search has been made of literature.

The Report then proceeds to discuss the chemical conditions adjacent to dampcourses brought about by different structural materials, such as bricks, natural stones and cementing materials. It is stated that an investigation of the action on cementing materials will be the most pertinent from the point of view of corrosion. The results are given of tests by five authorities on the effect on copper of cementing materials and dilute solutions comparable with those which may be present in walls. The conclusion is:

> The tests which have been made show that there is a definite but slight action of cements on copper, but Heyn's tests show that with Portland cement the action is slow. The presence of soluble salts from brickwork could produce slow corrosion, but nothing has been found in the literature which suggests that a rapid and progressive attack is likely. Possibly, for the present it would be advisable, in view of Bakken's observations, to restrict the use of copper dampcourses to brickwork or masonry laid in lime or Portland cement mortar.
>
> Considering that copper has been for so long used in roofing work and for a considerable period in the form of piping, it would seem unlikely that if any building material in common use in walls and roofs exerted a rapid corrosive effect, the fact would not have been recorded. While this is not evidence of suitability for use as a damp-proof course, it may nevertheless be taken into consideration.

SPECIFICATION

Suggestions for specification of copper dampcourses are next given with the observation that "in order to define the nature of the material in question, clause 2 of British Standard Specification No. 61 may be adopted."

> *Mechanical Properties.* It is desirable that the copper for damp-proof courses should be as soft as possible, in order that it may be rolled out flat, without springing or buckling on the mortar bed. "Soft-clean" temper copper, that is, copper which is fully annealed, should be used for this purpose. The liability to distortion of the damp-proof course, due to thermal effects, will also be minimised by using the soft tempered metal.
>
> *Weight.* A minimum thickness should be specified in order to secure resistance to chemical and mechanical agencies tending to destroy the continuity of the damp-proof course. It is suggested that this should be ·022 inches, that is, 24 S.W. gauge copper, having a nominal weight of 16 oz. per sq. ft.
>
> *Joints.* The simplest form of joint, produced merely by laying with an overlap of three inches, should be adequate under ordinary conditions.
>
> *Staining.* The washings from copper cause staining of light coloured stones such as Portland. The area of copper exposed to the weather will be so slight that marked discoloration is not to be anticipated. A slight discoloration below ground damp-proof courses will not be objectionable. To prevent discoloration when copper is used in parapet walls in light coloured natural or cast stone, it is recommended that the copper

should be kept back ½ inch from the face, the joint being then pointed with mortar.

Summary.

The physical and mechanical properties of soft-temper copper are considered favourable to the use of this metal for damp-proof courses.

A search has been made of literature with the object of discovering information bearing upon the durability of copper from the point of view of corrosion in a damp-proof course. Information bearing directly upon the behaviour of copper in this position has not been obtained, but observations upon the effect of lime and cement solutions and on the behaviour of copper embedded in cement suggest that the effects of lime and Portland cement mortar will not be destructive.

Copper for use in damp-proof courses should be soft-temper copper, complying with the requirements of clause 2 of British Standard Specification No. 61, and with a minimum weight of 16 oz. per sq. ft. Joints should be made by simply lapping the sheets to a distance of 3 inches.

PRICES OF COPPER DAMPCOURSE

The Editor has obtained the following current prices for cold-rolled copper strip, suitable for dampcourses, as a supplement to the abstract of the B.R.S. Report given above. These prices are those of the manufacturer as supplied to builders or builders' merchants, and do not, therefore, include labour in laying, allowance for overhead charges, or profit, etc. Hot-rolled copper is a little cheaper than cold-rolled, but is not obtainable in the long lengths desirable in dampcourse work.

Cold Rolled Annealed Copper Strip in Coils of Indefinite Length. For lots of 3 cwt. and upwards, delivered U.K. carriage paid.

					Approx. rate per ft. run.
4½ in. wide	by 24 SWG	at	£61 os.	per ton	2¾d.
9 in.	.. ..	..	£61 os.	..	5½d.
11 in.	.. ..	..	£61 os.	..	6¼d.
13½ in.	.. ..	..	£63 10s.	..	8d.

THE ARCHITECTS' DIARY AND TECHNICAL REFERENCE

The edition for 1935 of the Architectural Association's technical reference book* is easily the best compilation of data on building technique and architects' practice at present obtainable.

The ordinary commercially-published books of reference tables suffer from the two disadvantages of rapidly becoming out of date and of incompleteness. The Architectural Association gets over these by having a standing committee continually revising for the next edition. Last year the committee met once a week regularly, and sat for more than 300 hours in all. The personnel of the committee has been carefully chosen so that all special branches of knowledge are represented; this last ensures that all the facts and figures given are both full and really relevant to modern practice. The chairman is Mr. L. H. Bucknell [*F.*].

The publication is, however, rapidly becoming much more than a mere compilation of tables. Many of the technical notes are pure building construction, though for the most part dealing with recent developments that are not found in the usual text books. This is a very useful development and one that is much needed.

In the matter of books on building construction the requirements of the architectural profession are twofold. The first requirement is the education of students, for which text books should deal with fundamentals and elementary matters, erring slightly towards conservatism in practice by neglecting constructions that are not yet fully established. The second requirement is a book for office use by the architect and his experienced assistant, who require something in the nature of an *aide-mémoire;* that is, an easily consulted reference to points of technique —including the newest—with which they are not fully conversant. Such a publication must embody the latest research results (by the Building Research Station and others) as they are published. It must be quite clear that in the present rapidly-developing state of building technique the only feasible method of giving an accurate account of it is that adopted by the Architectural Association, namely, continuous revision by a committee of experts. Therefore, we hope to see this already valuable work expanded to cover advanced building construction more fully; at present its approach to this side is tentative. At the same time it deals with some matters that are mainly food for the junior student (*e.g.*, king-post roof trusses). It is, we think, not desirable to aim at two ends which are dissimilar, namely, elementary instruction and advanced technical reference.

The following is a random selection of useful pieces of information the majority of which are not obtainable in text books or which would require considerable labour to collect from various sources. They are given as an illustration of the general usefulness of the publication and also because on many of them questions are frequently asked of the R.I.B.A. Library. They are: acoustic data, a useful general summary; asphalte technique; recent practice in mortars and plasters (this principally recent discoveries by the Building Research Station); lightning conductors; modern metals for decorative use; recent data on glass; sizes, weights, etc., of all types of motor vehicles, also perambulators; chute and container systems of refuse disposal; refrigerator installations; septic tank design and sewage disposal generally; dimensions of telephone boxes; the law relating to town planning; vermin in buildings and wood-boring insects (from the R.I.B.A. JOURNAL); carpets and textiles, types and sizes; summaries, very useful to architects, of present-day practice in heating and ventilation; the sizes and types of ordnance survey maps; excellent notes on timber (partly by the Forest Products Research Laboratory)—its sizes, marks and uses, including plywoods; digests of the L.C.C. codes of practice in reinforced concrete and structural steel; a table of British Standard graphical symbols for electrical installation drawings, together with a list of British Standard Specifications affecting building. Generally, the digests of acts and regulations governing building are clear and concise.

This year's publication also contains two excellent special articles on "Building Finance for the Architect," by Mr. W. E. A. Bull, P.A.S.I., and "Housing Finance for the Architect," by Mr. John Dower, M.A. [*A.*].

The index, which was a weakness of previous issues, is much improved. The finding of sections in the body of the work would be easier if the main headings were in a heavier type.

* The Architects' Diary and Technical Reference, 1935. Published by the Architectural Association, 36 Bedford Square, W.C.1. 12s. 6d.

Reviews

TWENTIETH-CENTURY HOUSES*

Opening this book at random I came across a dialogue arranged in a new and interesting format. At the beginning of alternate paragraphs are little circles, in one of which there is depicted the profile of a young man and in the other a rather foolish looking greybeard, bald and bespectacled. The dialogue stages what is supposed to be the controversy between crabbed age and youth with its free and aspiring intellect. Such a contrast is very popular at the moment and hundreds of journalists have exploited it. The principal objection to this dialectical method is that it ignores the existence of the middle section, the people who, like the present writer, are in what used to be called the prime of life. We, apparently, are not newspaper copy and in consequence we are beginning to suffer from an inferiority complex! It is therefore with some trepidation that we make any comments upon the work of youth now grown so militant. I am, however, comforted by the reflection that ultimately it is not anno domini which counts in the realm of architectural theory but nothing else at all but argument. In my appreciation of Mr. Raymond McGrath's book any reference to his youth would be entirely irrelevant. I may, however, permit myself the following observation. I hope that in future editions he will see the advisability of removing the little circles with the profiles mentioned and substitute for them a different symbol or description. If he does this it will make him less vulnerable in years to come when he has to defend himself against his juniors, who should on no account be encouraged to borrow his own phrase and describe his opinions as "interesting in the museum sense."

The author is entitled to special consideration because he possesses remarkable gifts expressed in a variety of fields. He is an exquisite draughtsman and colourist, an etcher, a skilled hand at woodcuts and, although this is less generally known, a not inconsiderable poet. But this is not to say that he is just an accomplished dilettante. He is first and foremost an architect who has a keen mind for all the practical issues involved in the science of building. There is in everything he does a competence and precision, qualities which we like to think are modern in the best sense of this word. That Mr. Raymond McGrath writes quite as well as he does other things is, of course, to be expected. And it is not surprising that he has chosen the new medium of Basic English with which to clothe his thoughts, for by this means his book, which adopts an international standpoint with reference to design, is more readily accessible to foreign students. By strictly limiting his vocabulary to a few hundred words which have been especially chosen for their simplicity combined with a wide collective range of meaning he has succeeded in saying everything which he wants to say in a pleasantly fluent and unaffected manner.

This book is a blend of information and propaganda. The main informative section, Part V, comprising more than half of the total number of pages, consists of brief biographies of no fewer than 128 modern architects, one quarter of whom are British and the rest citizens of fourteen European countries, U.S.A., and Japan. These notes are accompanied in every case by photographs giving an exterior and interior view of a house and a very beautifully drawn plan. This section is preceded by an outline of architectural development during the last 150 years, chapters on housing in relation to town-planning, materials and structure, form and purpose, apparatus, furniture and ornament, and it is succeeded by the amusing dialectical knockabout between youth and age to which reference has already been made.

The historical section shows a wide knowledge of the modernist movement in architecture, and the author traces the connection between the work of innovators like Otto Wagner, Lloyd Wright and Dudok with William Morris, Lethaby, Mackintosh and other English rebels against the Classic tradition. But interesting though this historical outline may be, unquestionably the most important aspect of this book is its significance for present-day and future architectural design. What the author says on all the practical points of house-planning and structure I propose to take for granted, for while this part of his treatise is admirable in every respect, it concerns the least controversial element in the problem to be considered.

Mr. Raymond McGrath is not content with the narrow philosophy of functionalism which confines its attention to the individual building, for he is interested in larger units in which the superior harmony of group composition may be displayed. In his chapter "Town and Country" he brings a severe indictment against the disgracefully haphazard methods of urban development which have been exemplified in England during the last 50 years. Therefore the reader will be somewhat disappointed to find that nearly all the modernist examples in these pages are detached houses and thus fail to illustrate any of those subtleties of street composition in which the author himself finds delight. That is not his fault because the modernist house designers have not yet to any great extent turned their attention to that field of civic design in which our forefathers of the eighteenth and earliest nineteenth century showed such genius and mastery, namely in the grouping of houses in elegant combinations of continuous building. But although nearly all the houses in this book are detached, individually many of them are charming residences and exhibit a delightful interior spaciousness. And there is one great artistic merit they all possess: they represent a protest

* *Twentieth-Century Houses*. By Raymond McGrath. London: Faber & Faber. 1934. 21s.

against an extremely disruptive influence in civic design, namely the restless profusion of gables and hipped roofs. It is to the credit of the modernists that they have made a stand against this particular abuse and have done much to popularise the flat roof, a feature which is not only wholly admirable on hygienic grounds but which in due course will bring back to its former repute that especially English element of urban elevational design, namely the *parapet*. For it is in the distinguished use of the parapet that both English Classic and English Gothic showed a marked superiority over foreign examples. And when ornament returns to modern architecture it is in the parapet that it will find a very appropriate field.

In the brief space allotted for the review of a book one may well hesitate to raise the extremely controversial issue of fenestration, because this cannot be discussed without reference to general principles of composition. Few even of the modernists would argue that one is entitled to put windows of any shape or size just where they happen to seem most convenient for the room, without *any* consideration of the pattern they present to the spectator who sees them from the outside of the house. Mr. Raymond McGrath certainly holds no brief for such a heresy. He wants to arrive at the truth about this matter, but he does not think that this truth should be stated in the language of dogma. In his chapter entitled "Form and Purpose," in which he deals with the relationship between functionalism and architectural composition, he devotes some space to a criticism of the canons of Number, Punctuation and Inflection, which were formulated by myself in a book published fifteen years ago. The application of these canons, so he fears, might lead to the conclusion that "most of the examples in this book would have little to their credit." It would obviously have been improper for me in this context to join issue with Mr. McGrath on a question which concerns my own theory had he not himself raised the subject. Perhaps I may be allowed to point out that in one respect he has unwittingly conveyed to his readers a misdescription of what this theory is. It has nothing whatsoever to do with the doctrine of "empathy"as expressed by Lipp and Geoffrey Scott, nor should it be described as " behaviourism." The principles of Number, Punctuation and Inflection represent an attempt to describe in precise terms the organic interrelationship of parts, which is, in fact, exemplified in the forms of animate Nature. Judged by such a standard it may be said that many of the examples in this book do not possess organic form. Can even the most uncritical spectator help being displeased by the unresolved duality of example 69? And would not most people agree that the house shown in example 35 seems unfinished because it lacks punctuation at the top? On the other hand, a number of the houses illustrated are elegantly composed, usually because in various subtle ways they exemplify the principle of Inflection, by virtue of which even the most unsymmetrical composition can have formal beauty in a high degree.

An alternative "system" of architectural composition, sponsored by Le Corbusier, is mentioned on page 37. This is based upon a method of "guiding lines and triangles," but the criterion is so extremely limited in scope that it seems as ineffective as the butcher in "The Hunting of the Snark," who " could only kill beavers." And when the "artist " begins to juggle with these little triangles, that, of course, is the point at which the mathematician walks out of the room! Because, if art is to be interpreted in terms of mathematics, a mathematician would at least expect that a wide range of this science would be brought into use for the purpose of such interpretation. Architectural composition seems a poor thing if it can be explained, as Le Corbusier professes to explain it, in terms of mathematics of a scarcely higher level than that reached in Standard I of an elementary school.

But Mr. McGrath shows that his own æsthetic theory is not contained within the limits of geometrical rules, but depends upon the application of logic to a large number of matters connected with the art of building. The great virtue of his book is that it represents the scientific approach to the study of architecture. Again and again he returns to the concept of "organisation." Every architect worthy of the name wishes to acquire the newest, provided that they also be the best, ideas on the subject of house-planning, equipment and furnishing. We can study these matters without quarrelling about style. A modernist designer can use the old-fashioned brick and plaster and yet give to a house a peculiarly "modern" air, and it is likewise possible to put the imprint of the Classic style on steel, concrete, plywood, glass or any other material which may be mentioned. Mr. McGrath's book, in its insistence upon the need for organisation in all the departments of structure and design, can be read with as much pleasure and profit by the hardened "traditionalist" as by the iconoclast who in matters of style would start anew.

It is perhaps to be expected that in his selection of illustrations are some examples which show considerably less evidence of this quality of organisation than do others. And if his comments upon these houses appear at times to be somewhat too laudatory, this is because he is not concerned to place his architectural confrères in an order of merit or demerit, but rather to further an architectural movement in which he sincerely believes by collecting together for purposes of general comparison a number of buildings expressing a similar stylistic tendency.

This review would be incomplete without a brief reference to the author's own work, several examples of which are here shown. "Finella," regarded by many people as the most charming modern domestic interior in England, is too well known to need any further commendation here. It is appropriate that the book should be dedicated to the owner of this house, Mr. Mansfield Forbes, the distinguished humanist, one of whose many activities is to inspire an enthusiasm for the true study of architecture and to try to make this art a live and potent cultural influence. A. Trystan Edwards [*F.*].

EVERYDAY THINGS ONCE AGAIN*

Mr. and Mrs. Quennell, in completing their survey of the ages, have in nine volumes run the whole gamut of progress from the Stone Age to the Day before Yesterday. The afflatus which inspired them, now many years ago, has not flagged; their treatment of the most pregnant years in the history of everyday things in England is still vigorous and animated.

The eighty years under review have witnessed a world war in which great kings and empires have fallen and geography become topography, time has been compressed and space reshaped. The authors may well say that they found this the most difficult volume to produce of the whole series.

The work embraces a period from the coming of Queen Victoria to the present time. Its chapters deal in turn with the arts, with manufacture, food, clothing, transport, science and, as one would expect, largely with architecture and its allied crafts and trades. The trend of them all is skilfully set forth, but there is no attempt to foretell the future: this book will be read by those who are going to see it for themselves.

Other matters touched upon are furniture, town planning, modern methods of production and distribution, public health and dress. A wise and humane commentary informs the whole and creates a living picture which should enlist the interest and awake the enthusiasm of the most callow youth.

The whole of these Quennell books are antidotes against those history books of the schools which glorify the puppet politician and king and ignore the work of Watts, Wren, Newton, Purcell, Lister and their like. It is this sense of values and of proportion which makes the books invaluable.

The book opens with a "Cursory Chronicle" which sets the stage with a masterly summary of the period. Famous names and events form a mosaic which evokes dormant memories or lively curiosity according to the age of the reader. Throughout one encounters references to books and pictures which have inspired, disturbed or amused us, and which we realise we ought never to have forgotten.

To us architects, as a matter of course, the generous contributions to the history of architecture are of primary interest, but if we in particular enjoy these chapters as men we must necessarily judge them as architects. It cannot be accepted, therefore, that the Red House with its 18 inch external and 9 inch partititon walls is by that same token necessarily well built, nor that, in spite of having no living-room or bedroom with a south aspect, it is well planned. Extravagance in the use of materials is unscientific and the authors should not have fostered the vulgar belief that massive construction is necessarily good building.

There is an odd confusion of thought in the extraordinary statement that "Reinforced concrete is, after all, not very real building, because it depends on the carpenter . . . and this adds to the cost." The same could obviously be said regarding bricks, cast iron and much else. It cannot surely be the authors' intention to decry a material which has opened up new vistas in architectural design and infinite possibilities in the matter of construction.

Of special interest to the architect is the chapter which describes the profound change in the nature of our occupations, both in work and play, which came about in the period under review. On this theme the authors afford rich reading and the essence of this change is imparted in trenchant and epigrammatic sentences throughout. Speaking of tools and appliances in the past days, when the real craftsman flourished (we know him to-day by the odious name "mechanic"), the authors remark, "Then you never bought anything you could make, now you never make anything you can buy." Again, in speaking of Ford's first hideous mass-produced car, the authors' sly comment is that the customer could have any colour he liked so long as it was black. How true this is to-day of so much of the paraphernalia of our work and leisure.

The value of such recapitulation can hardly be overrated and many a youth will live to bless the authors for bringing into his ken matters of art and literature which will be a lifelong solace to him.

It is good to know how the other half of the world lives; it is good, moreover, to be made to realise the fact that we depend for our very existence on the activities of men of every race and clime. A young man who grows up with a hatred of what is ugly and mean in life, a benevolent interest in and consideration for the work of other people and nations, and a love and working knowledge of the arts will make the best type of patriot. One could not conceive better preceptors than the Quennells in these matters and one can only hope that the next decade will furnish forth so much matter and preserve the authors in such health, that the volume under review will not be the last of the series.

One or two matters, perhaps of small moment, provoke comment. One wonders, for instance, in what sense the four charts should be read. Why such blanks in an historical chart which includes the murder of Lord Henry Cavendish as the only significant event between 1881 and 1884? Again, the arts column makes very depressing reading in the matter of music and literature. In these eighty years was there not something greater produced than a Gilbert and Sullivan opera-bouffe? whilst Kipling and Du Maurier were surely not the greatest lights of the literature of that period and Holman

* *A History of Everyday Things in England, 1851–1934.* Written and Illustrated by Marjorie and C. H. B. Quennell. B. T. Batsford. 1934. 8s. 6d.

Hunt and Frith of the arts. This would seem a shocking lapse; on further scrutiny, however, one finds the Albert Memorial and St. Pancras Station given as typical of the architecture, so that one can only suspect that the whole galaxy is merely mentioned for the joke's sake. If this be so we venture to suggest that this is somewhat too subtle for the unsophisticated mind of youth.

One could wish that the manifest horrors of mass production had provoked the authors to some expression of opinion other than almost unqualified praise. They say "mass production means low prices, high wages, short hours and leisure for all." This statement is misleading and inaccurate in essence and incalculably harmful without qualification and warning. To the artist mass production is one of the powers of darkness. Imagine one trying to express oneself in a home built and furnished on the hire-purchase cum mass-production plan. The authors appear even to deride in terms of mass production the spacious comfort of the pleasant suburb illustrated in Fig. 61. This is indeed stupifying, and though in the final analysis the authors seem to recant this heresy, this lapse will, I make no doubt, seem to many readers a serious blemish in a work of outstanding interest and value.

The book gives a wonderful bird's-eye view of English life; although bird's-eye is perhaps not the "mot juste" for a generation which has experienced the essential flatness of such a view. We have, on the contrary, a panorama in high relief of a little world, populated with sentient beings and depicted by detached, yet intensely interested, observers with a praiseworthy economy of words and a wealth of illustrations. Of the latter the line drawings are particularly charming and the authors' skill in marrying picture to context is unrivalled.

PERCIVAL M. FRASER [*F.*]

A MEDIÆVAL MANOR

THE MANOR AND HOUSES OF GORHAMBURY. *By J. C. Rogers, A.R.I.B.A.*

[*Reprinted from the St. Albans and Hertfordshire Architectural and Archæological Society Transactions, 1933.*] *80 pp., 30 plates.*

This treatise is a substantial contribution to the records of our Manor Houses. In it Mr. Rogers gives a vivid history of a sequence of four great mansions, the seats of the Lords of the Manor of Gorhambury.

Starting from the year 997, when as a gift from King Athelred the Manor then known as Westwick came into the possession of the Abbey of St. Alban, the story is carried on until the present day. It is set down with precision, and in such detail as to convey the impression that no source of information has been left unexplored. Weight is added by the care taken to discriminate between fact and probability. Each house is in turn described from its inception, and the description covers the changes it underwent in the course of its existence.

The four manor houses dealt with are as follows:—The first, called by the author Gorhambury I, which was built by Abbot Geoffrey de Gorham, from whom the manor's present name derives, and which stood until the sixteenth century. The second, Gorhambury II, the building of which was begun after the dissolution of the monastery by Henry VIII, by Sir Nicholas Bacon and finished by him about 1568; a notable place twice visited by Queen Elizabeth. The third, known as Verulam House, much smaller and more compact in its planning than its predecessors, built by Sir Francis Bacon about 1617 whilst Gorhambury II was still in being. This third house, however, survived for hardly 50 years, and no trace of it remains above ground. But it was distinguished by an elaborate system of fish-ponds, or as we might now perhaps call them water-gardens, and these stand to-day much in their original form. In proof Mr. Rogers gives a plan which he has made on the basis of Sir Francis Bacon's specification for them. The fourth and last house is that now existing, Gorhambury III. It dates from 1777 when, in consequence of Gorhambury III having become uninhabitable chiefly because of the disintegration of its rubble walling, the third Viscount Grimstone determined upon building an entirely new mansion, entrusting its design to Mr. (afterwards Sir) Robert Taylor.

The author draws attention to the singularity that for each of these four houses an altogether different site was chosen, and he suggests that these changes were in part at least due to questions of water supply. On the methods employed for water carriage he throws some interesting sidelights.

Throughout the treatise wherever the textual descriptions are derived from ancient records the references are clearly given. There is an abundance of plans, drawings and photographs showing the manor lands, the houses with their structural and decorative details, and their gardens. Also, besides the extracts from contemporary inventories relating to the parts of the houses and their furnishings, there are supplementary lists of items of work and household goods with their prices.

Recorded costs of ancient building work are always of interest. They cannot, however, fail to excite speculation as to what the relative values would be if expressed in the money of to-day. Such conversion is, as everybody knows, by no means an easy matter, and it is to be hoped that some day a skilled economist may compile a table of approximations. For, without translation, figures of cost in terms of the money of times past are almost certain to create an impression of extraordinary cheapness, whereas the contrary is much the more probable.

A treatise such as this has naturally to be kept within bounds. But one cannot help wishing that the author had seen his way to include some account of the manor as a whole, sufficiently at least to show the relations between it and the Manor Houses themselves. For by so doing he would have enabled the reader to see how it was that these great houses came into being at all, as well as to understand the needs which shaped their designs. The knowledge which he has displayed encourages the hope that in some future publication he may be persuaded to complete the picture in these respects.

In conclusion, this is a good piece of work. It is no mere drab recital of fact. For beyond the human interest inherent in the buildings themselves, there is in the descriptions of them a warmth given by the love of the author for his subject which makes them very readable.

R. MINTON TAYLOR [*F.*]

THE MINISTRY OF HEALTH ANNUAL REPORT

HOUSING AND TOWN PLANNING. *Extracts from the Annual Reports of the Ministry of Health for 1933-34. London. H.M.S.O. 1934. 1s.*

The sections of the Ministry of Health Annual Report for 1933-34, which deal with Housing and Town and Country Planning, have been published separately at the price of one shilling, and can be obtained from H.M. Stationery Office, or its agents. The preface to the section dealing with Housing, outlines the housing policy of the Government in which, as it will be remembered, an attempt was made to encourage private enterprise housing by removing the subsidy from local authorities' housing and thus removing the private builder's chief competitor. The scheme has now had a full year in which to be tested, and the report can state with cautious self-approval that "the Government's reliance on private enterprise as the main source of the future supply of working-class houses was not misplaced. The number of new houses provided by private enterprise reached in the six months following the discussion of the Bill in Parliament 37,088, or 24,632 more than in the corresponding six months of the previous year."

The Act raised a great body of criticism, largely because it was contended that no private enterprise could, or would, provide houses to let at low enough rents for the poorest working men. To meet criticism the Government required all returns to state the rateable value of the houses and whether they were to sell or let. Returns for the half-year ended March 1934, show that of a total of 120,781 houses built during that period by private enterprise, 44,754 are of a rateable value of £13 (£20 in greater London) or less, of which 13,014 are to let. This sub-section of the report concludes with a verbal demonstration that the policy has been a success. One interesting inquiry was made to investigate secondary movements consequent on the supply of new houses; it showed that the provision of 709 new houses enabled 694 working-class families to move, in addition to the occupants of the new houses; of these, 694,364 definitely improved their position.

The report also deals at some length with the progress of slum clearance. It will be remembered that in a famous circular issued in April 1933 (No. 1331), the Minister expressed his opinion that the work on slum clearance needed acceleration, and asked for five-year programmes from authorities. It is here reported that a good response has been made to the appeal and that a satisfactory beginning has been made with the application of the schemes. The problem of overcrowding has been treated apart from the main problem of slum clearance. The programme has recently been published but is not considered in the Annual Report.

The report next passes to unsubsidised housing by local authorities. It seems that the discontinuation of the subsidy has to some extent discouraged local authority building. The remaining parts of the report deal with the other aspects of the housing question in considerable detail. There are figures on every page which demand attention either for the light they throw on the general problem or for their own particular interest. It is significant that the average cost of all non-parlour houses for which tenders were let during the year was £289, as compared with £301 for the previous years. It is also significant that the average cost of dwellings in buildings of three or more storeys was £456 as against £295 for ordinary non-parlour houses. This figure is for building cost alone and does not represent cost of land, which is generally a decisive factor. The multi-storied buildings are almost always built in central urban sites where land costs are too high to allow extensive low building. The low site area covered by high tenements compensates in part for the excess in building cost. It is probable that in the next few months the cost of high building will be reduced considerably as our technique improves. There are already several admirable new tenement schemes which have been built at really low cost without loss of standard by making intelligent use of modern methods of construction, and not less important by adjusting the plan to meet modern needs.

The housing part of the report concludes with sections on Rural Housing, the Cinderella of housing; The Small Dwellings Acquisition Acts; Public Utility Housing; Housing Management, in which attention is drawn to the Moyne report recommendation of the Octavia Hill system, and finally a special note on London Housing and on Finance.

Part two deals with Town and Country Planning, mainly under the 1932 Bill and its regulations. By the end of March 1934, over 12,150,000 acres, or nearly one third, of England and Wales were covered by planning resolutions or schemes; the total number of authorities which had prepared or were preparing schemes being 821. During the year, 44 authorities initiated schemes independently, and 58 through the medium of joint committees and county councils. We cannot deal at length with the planning part of the report, but it, no less than the housing section, deserves close study. One interesting section prints notes on decisions made by the Ministry on appeals and demonstrates that there is a genuine desire to implement the powers possessed by authority to preserve amenity and control development.

BERLAGE

H. P. BERLAGE. TER GEDACHTENIS. 21 FEBRUARI 1856—12 AUGUSTUS 1934. *Amsterdam. Bouwkundig Weekblad Architectura. 1934.*

Dr. Berlage's influence on the modern architecture of his own country and of Europe as a whole cannot easily be overestimated. By his own ability and personality he brought the architecture of Holland from as deep a pit of mediocrity as had engulfed the building of any country and established, or rather, re-established, the tradition which has been developed by subsequent Dutch architects to make the work of that country a model for modern architects everywhere. Berlage was essentially a master who taught by his works. He published no books and was not, we believe, one who often indulged in public speaking or lecturing. His actual buildings are the measure of his great influence on architecture for the past 35 years; an influence which will continue to exert itself for many years to come. Consequently a record of the respect with which he was held by his contemporaries such as is given by this memorial book is of great value. The book consists of a number of tributes to his memory by distinguished compatriots, foreign architects and others who had known him and come in contact with him and his work. They have been collected and published by the famous Dutch architectural journal *Bouwkundig Weekblad Architectura* and form a worthy memorial to a great man. In addition to the tributes are illustrations of a number of his principal buildings from the Diamond Workers Union of 1899 to the Gemeentemuseum of 1934, and as a frontispiece there is an excellent photograph of Berlage himself.

Review of Periodicals

Within the self-imposed limit of these pages attempt is made in this review to refer to the more important articles in all the Journals received by the library. None of the journals mentioned are in the loan library, but the librarian will be pleased to give information about prices and where each journal can be obtained. Members can have photostat copies of particular articles made from journals in the library.

HOSPITALS

Architect and Building News. *Vol. CXLI. No. 3447. 11 January.*

Sully Tuberculosis Hospital, Glamorgan. (Pite, Son and Fairweather [*FF.*].) A large scheme with 50-bed wards in échelon—one for men and one for women in each of three categories: convalescent, ordinary and advanced.

Construction Moderne. *Vol. L, No. 16. 20 January. P. 374.*

The new Beaujon hospital. (Walter, Plousey and Cassan.)

Master Builder. *Vol. XL. No. 870. January. P. 17.*

General principles of American hospital planning by Dexter Morand.

INSTITUTIONAL BUILDING

Construction Moderne. *Vol. L, No. 14. 6 January. P. 313.*

"Maison de la Chimie" Chemistry House. A large building for the central organisation of chemistry research and industry in France. The building contains no laboratories, but reception rooms, lecture theatres, congress halls—in fact a building similar in use to the R.I.B.A. The new building is an addition to an old town house in rue St. Dominique, built by Larsurance in about 1708.

SCHOOLS

Construction Moderne. *Vol. L, No. 16. 20 January. P. 358.*

Groupe scholaire, Boulogne-Billancourt. (J. Debat-Pousan.)

BROADCASTING

Arkitekten (Helsingfors). *Vol. XXXI. No. 11. P. 157.*

Helsingfors Broadcasting House (Eino Schroderus.)

RAILWAY STATIONS

Arkitekten: Maanedshaefte (Copenhagen). *Vol. XXXVI. No. 11-12.*

Electric railway stations on the Copenhagen suburban lines at Frederiksberg, Godthaabsvejens, Borups Allé, Norrebro, etc. All extremely interesting buildings, well illustrated and described.

LIBRARIES

La Construction Moderne (Paris). *Vol. L, No. 15. 13 January. P. 337.*

The new Versailles periodicals stack of the Bibliothèque National. One of the most important recent library buildings in Europe. (M. Roux-Spitz.) A full and very valuable description by S. Gille-Delafon.

Architect and Building News. *Vol. CXLI. No. 3447. 11 January. P. 50.*

Builder. *Vol. CXLVIII, No. 4797. 11 January. P. 61.*

The Radcliffe Science Library, Oxford. (Thomas Worthington and Sons [*FF.*].)

CHURCHES

Tér és Forma (Budapest). *Vol. VII, No. 12.*

Special number on modern churches illustrating many good examples in Hungary and elsewhere in Europe.

SPORTS BUILDINGS

Monatshefte f. Baukunst u. Stadtebau. *Vol. XVIII, No. 1. January. P. 33.*

The buildings in a new "Exercise Centre" at Lüdenscheid, including a good open-air bath described in detail.

Bouwkundig Weekblad. *1935. No. 2. 12 January. P. 21.*

Large covered tennis court, "Apollo," in Amsterdam. (A. Bocken and W. Zweedijk.)

Architects' Journal. *Vol. LXXXI, No. 2086. 10 January. P. 54.*

Blackpool Pleasure Beach. (Joseph Emberton [*F.*].) An efficient and imaginative combination of every type of amusement contrivance.

WAREHOUSES

Architects' Journal. *Vol. LXXXI, No. 2086. 10 January. P. 49.*

Warehouse in Blackfriars. (Sir Owen Williams.) Reinforced concrete structure.

DOMESTIC

Architects' Journal. *Vol. LXXXI, No. 2087. 17 January. P. 113.*

An analysis of a block of flats by Lubetkin and Tecton at Highgate. An important article of value to every one concerned in this type of work. Illustrates the essential architectural process of thought applied to the solution of a modern problem in which the designers have made an unusually conscious attempt to reason from first principles.

Innen Dekoration. *Vol. XLVI, No. 1. P. 3.*

Country house at Marienbad for Dr. K——. (Fritz Gross.) A detailed consideration of this excellent modern house: plan and equipment and design of each room analysed in turn.

Monatshefte f. Baukunst u. Stadtebau. *Vol. XVIII, No. 1. January, P. 21.*

A doctor's house in Offenbach am Main (Rudolf Schwartz), including laboratory, consulting room, etc.

Casa Bella (Milan). *Vol. XIII, No. 85. P. 14.*

Plans and descriptions of four recent balconied flat buildings in Milan by Lingeri and Terragni.

Architects' Journal. *Vol. LXXXI, No. 2087. 17 January. P. 125.*

House at Bieldford, Aberdeenshire (A. Marshall Mackenzie and George) designed by Mr. David Stokes [*A.*] for his own use. Good illustration of modern design in traditional and indigenous forms.

Architects' Journal. *Vol. LXXXI, No. 2086. 10 January. P. 58.*

Modernist house at Bognor (A. M. Chitty [*A.*] and Tecton). Reinforced concrete and severely "functional."

Architect and Building News. *Vol. CXLI, No. 3447. 11 January.*

Apartment House, Paris, by Le Corbusier and Jeanneret.

Correspondence

TOWN PLANNING IN GREATER LONDON
The Highway Development Survey

House of Commons, S.W.1
14 January 1935.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—May I be permitted to express my views regarding the Minister of Transport's decision to put in hand a comprehensive survey, involving the preparation of a plan, of the highway developments required in the London Traffic Area.

All road users are only too painfully aware of the dangers and delays that are constantly arising through the inadequacy of Greater London's road system. But is it not an indisputable fact that roads constitute only one feature of town planning? What of such vitally important questions as the allocation of areas for different uses and the reservation of the much needed open spaces? It is an elementary axiom that the use to which neighbouring lands are put largely governs the volume of traffic that will utilise a given highway.

The whole question of roads is definitely interlocked with planning and housing, and no adequate solution of London's urgent problems will be found unless there is not only active co-operation among those dealing with highway schemes, town planning schemes and housing schemes but also proper co-ordination of their various proposals. Is any one satisfied with the present situation in regard to the planning of London and will not the Government's new Bill to relieve overcrowding raise a further crop of problems?

For some time past I have urged the necessity of making an exhaustive survey of the Greater London Region so that an efficient master town-plan may be prepared for this densely populated territory. All large matters of regional importance should undoubtedly be dealt with on the basis of a central plan for the whole unit, and not in the present piecemeal fashion.

If, as seems the case, there is no likelihood that these baffling problems will be tackled in earnest by the innumerable Local Authorities, is it not high time that a Royal Commission should be appointed to inquire into and report both upon Greater London's housing and planning problems and also upon the whole question of the future government of this vast region?—Yours, etc.,

H. L. NATHAN.

THE R.W.A. SCHOOL OF ARCHITECTURE

13 Charlotte Street,
Park Street, Bristol.
14 January 1935.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—The Obituary Notice appearing in the JOURNAL dated 12 January, of Thomas Falconer [*F.*], contains a reference to his keen interest in "the Royal West of England School of Architecture (a branch of Bristol University)."

May I point out that this School is the Royal West of England Academy School of Architecture, controlled by a council consisting of members of the R.W.A. and the Bristol Society of Architects?

The School is affiliated to the Architectural Association, London, and, although on friendly terms with the University of Bristol, is not a branch of that body.

I should like to take this opportunity of expressing my great appreciation of the keen interest, help and advice given by Mr. Falconer to this School of Architecture.—I am, Sir, yours faithfully,

G. D. GORDON HAKE,
Principal,
R.W.A. School of Architecture, Bristol

CHILDREN'S LECTURES
CHRISTMAS HOLIDAY LECTURES FOR BOYS AND GIRLS

The eight series of informal talks on architecture for boys and girls was given at the R.I.B.A. during the first week in January. This year, for the first time since the start of the series, the lectures, which were given in the Henry Jarvis Hall, were given in a room large enough to hold all the children who wanted to come, and nobody had to be turned away as at No. 9 Conduit Street, because of the lack, not only of seating and standing, but actually of breathing room.

The lecturer this year was the Hon. Humphrey Pakington [*F.*], who took as the title of his series "The Changing Face of England." In three lectures, given on 31 December, 2 January and 4 January, he dealt with the Past, Present and Future of England, illustrating his lectures with lantern slides. In his first lecture Mr. Pakington described England as it was at the time of the Roman occupation after the Conquest, in Elizabethan times, and in the eighteenth century. The second lecture was devoted to the present need for Planning. He dealt with the disastrous effects to the English countryside of our lack of planning, our haphazard and rapid building on the outskirts of towns, the evils of ill-planned roads, and the muddle of petrol stations, advertisements, pylons, industrial buildings, all in themselves useful things which could, with better planning, be beautiful. In particular he attacked the prevailing false attitude towards modern life architecture which insisted on manufacturing Tudor shams. In his last lecture (which was incidentally the best attended) he spoke of the future and of the ways of making England a more beautiful place. England, with its great overburdened cities, noisy and muddled, was uglier now than it had ever been. He suggested that, instead of large cities, the population would be spread out in small towns: small streets would disappear; public buildings, each on an island site with open courtyards, would be grouped round a central square, from which roads would radiate to an outer ring with trees and houses where people would live, and beyond that pleasant outer ring would come the real, unspoilt country. No town should have more than a population of 10,000, and, where industry demanded more, there would be groups of towns near enough to make commerce possible, but otherwise independent. Fields would be larger on account of large-scale farming, towns and roads would be floodlit, and England would again be full of colour as it was in the Middle Ages.

The lectures were well and, as usual, enthusiastically attended, the average number of children present being between three and four hundred. The continued success of the series and its importance in the education of public opinion have prompted the idea that the provincial architectural societies might equally successfully organise lectures on the same lines, and it is hoped that next year similar lectures will be given, not only in London, but in the provinces.

Obituary

ELLIS MARSLAND [*F.*]

Ellis Marsland was born in 1854 and died on January 9 1935, at the age of 81. He was educated at Painswick Grammar School, and the Royal Academy Architectural School, where he was awarded the R.A. Silver Medal, and was then articled to Charles Augustus Gould, A.R.I.B.A.

In 1879 he started in private practice at 62 Camberwell Road, later practising at Kensington Park Road, and 32 Camberwell Grove, and in 1926 he went into partnership with George Trotman [*L.*], who now carries on the practice at 75 Bushey Hill Road, S.E.5. Among his architectural works were houses at Oxted, Potter's Bar and Surbiton, shops in Kensington, the *Sportsman* Offices, Fleet Street, Printing Offices at Redhill and in Fetter Lane, restorations and additions to Cotswold houses round Painswick, Gloucestershire, where he lived, and artisans' dwellings in Camberwell. During the war he carried out a number of fire surveys for the War Office and hospitals, and organised fire tests with building materials, and published a pamphlet on "Rules and Regulations affecting Building Operations in the Metropolitan Area." He held the appointment of District Surveyor for North-East Kensington and Camberwell.

Mr. Marsland was a past-president of the Society of Architects, of which he had been Hon. Secretary for 15 years, and a recipient of its Gold Medal. He was also a Past-President of the District Surveyors' Association, the Hon. Secretary of the British Fire Prevention Committee and a Member of the London Survey Committee. In connection with his work for Fire Prevention he was the recipient of the Russian Order for "Zeal," the Belgium Civic Medal of the First Class, and the Royal Berlin Police (Fire Prevention) Medal.

After his retirement from practice four years ago Mr. Marsland lived in Gloucestershire at St. David's, Painswick, near Stroud. He leaves a widow.

Mr. C. MacArthur Butler has sent us the following note on Mr. Marsland:

Ellis Marsland was a founder-member of the Society of Architects and its Honorary Secretary for fifteen years, 1893-1908, and for many years afterwards he continued to serve from time to time on the Council, and was the recipient of the Gold Medal and other presentations in appreciation of his services. He was an ardent advocate of Statutory Registration, and was one of those who in the early days "stumped" the principal provincial centres and laid the seed of the movement which led eventually to the amalgamation of the society with the R.I.B.A., and the passing of the Architects' Registration Act of 1931.

Ellis Marsland was one of the most kind-hearted and generous of men who gave freely of his time and substance in supporting the objects of the society and other institutions, such as the British Fire Prevention Committee. He was also very hospitable, and many of his friends will recall with pleasure being his guests at the Court House, Painswick, a beautiful example of Cotswold architecture, where he lived for a time, and where he had hoped to end his days, but the economic upheaval of later years compelled him to part with it, though he still resided in the neighbourhood, where he found occupation in his retirement in antiquarian matters. He died suddenly on 9 January in his eighty-first year after a long and busy life devoted to the service of others. He was entirely unselfish, a kind and generous friend and a gentleman who will be greatly missed by all who came within the sphere of his influence.

Notes

SOCIÉTÉ DES ARCHITECTES DIPLOMÉS PAR LE GOUVERNEMENT

The Société des Architectes Diplomés par le Gouvernement have recently elected Sir Giles Scott and Sir Banister Fletcher as Corresponding Members.

PRESIDENT'S ENGAGEMENTS

During the next few months the President will attend the following dinners:—

1 February.—Northern Architectural Association Annual Dinner, Newcastle.

7 February.—West Yorkshire Society Annual Dinner, Harrogate.

14 February.—Annual Dinner, North Staffordshire Society.

21 February.—Annual Dinner, Wessex Society, Bristol.

1 March.—Annual Dinner, Birmingham and Five Counties Architectural Society, Birmingham.

7 March.—Annual Dinner, Leicester and Leicestershire Society, Leicester.

1 May.—Annual Dinner, Essex, Cambridge and Hertfordshire Society of Architects, Southend.

VICE-PRESIDENT'S ENGAGEMENTS

Mr. W. H. Ansell, Vice-President, attended the Annual Dinner of the Nottingham, Derby and Lincoln Architectural Society at Nottingham and represented the President on 17 January.

He will also attend the Annual Dinner of the Electrical Contractors' Association on 29 January to represent the President.

MR. I. G. LINDSAY, A.R.I.A.S.

Mr. I. G. LINDSAY, A.R.I.A.S., Edinburgh, has been appointed Editor of *The Quarterly*, in succession to Mr. R. Mervyn Noad, A.R.I.B.A.

TECHNICAL LECTURES AT THE BUILDING CENTRE

A series of six Technical Lectures of special interest to members of the architectural profession and of the industries concerned will be given at the Building Centre, 158 New Bond Street, at 8 p.m., on the following dates:—

Thursday, 31 January.—"Metallic Rust-Proof Finishes for Architectural Ironwork," by I. G. Slater, Esq., M.Sc., Ph.D. Chairman—Francis Lorne, Esq., F.R.I.B.A.

Thursday, 7 February.—"Divining for Water, Oil and Coal." by P. Gatward, Esq. Chairman—Maurice E. Webb, Esq., D.S.O., F.R.I.B.A.

Thursday, 14 February.—"Consideration of the Home Office 'Manual of Safety Requirements in Theatres and Other Places of Public Entertainment,'" by Lt.-Col. Guy

Simons, D.S.O. Chairman—R. E. Stradling, Esq., C.B., M.C., D.Sc., Ph.D., M.Inst.C.E., Director Building Research Station.

Thursday, 21 February.—"The Application of Coal and Coal Burning Appliances to Modern Buildings," by H. L. Pirie, Esq., M.I.Mech.E., Chief Engineer, Coal Utilisation Council. Chairman—Oscar Faber, Esq., O.B.E., D.Sc., M.Inst.C.E., Consulting Engineer.

Thursday, 28 February.—"Properties of Bricks in Relation to Processes of Manufacture," by A. Zaiman, Esq. Chairman—J. R. Leathart, Esq., F.R.I.B.A.

After each lecture an open discussion has been arranged in which architects and technicians will take part.

Admission to each lecture will be by ticket which may be obtained free on application.

AERODROMES ADVISORY BOARD

The Aerodromes Advisory Board announces the establishment of a Site Selection Committee through which it offers to advise Local Authorities and other bodies on the selection of sites to be purchased or reserved for future aerodromes.

The Board, which began its work earlier this year under the chairmanship of Capt. the Rt. Hon. F. E. Guest, M.P., has as its members representatives of the principal professional and technical institutions—aeronautical, engineering, architectural, surveying, town planning, etc.—whose co-operation will contribute to the efficient and rapid development of the groundwork of civil aviation.

The lack of any regular or satisfactory system, by which municipal or other bodies engaged in or contemplating the provision of aerodromes, might obtain advice on their projects, has occupied the earnest attention of the Board. Aerodrome provision falls naturally into two stages—the stage of site selection and the stage of the development of selected sites as aerodromes.

For the first (site selection) stage the Board has decided to set up its own organisation, in order that the necessary advice may be available on the broadest possible basis, in consistent and regular form, and at the lowest possible cost. The most difficult questions arising at this first stage are those concerned with the relation of a potential aerodrome site, and of the town it would serve, to a future national airway system whose pattern and organisation are, as yet, undefined. The Board has given close attention to this aspect of the matter, and has formulated and submitted to the Air Ministry proposals for the preparation of a survey and scheme of development for the future air-routes and aerodromes of Great Britain.

At the second (aerodrome development) stage it is essential that the promoting body should obtain the advice of fully qualified professional consultants. The Board has made a careful investigation of the qualifications appropriate to such consultant work, and will shortly issue to Local Authorities a memorandum incorporating their recommendations in this respect, together with general advice on procedure in the establishment, licensing and development of civil aerodromes.

Local Authorities or others who may wish to consult the Board at any stage of aerodrome work, or in particular to obtain the Board's advice on the selection of sites, are invited to apply to the Secretary, Aerodromes Advisory Board, 5 Verulam Buildings, Gray's Inn, W.C.1.

The Board wishes to emphasise the vital importance of early purchase or reservation of aerodrome sites. A good site near a town is difficult to find, and is almost invariably subject to the threat of building development; delay may make the cost prohibitive or involve the irrevocable loss of the site. In most cases, purchase on an ample scale is strongly recommended, since the land is likely to be a safe and probable profitable investment, even if it proves to be in excess of the aerodrome requirements.

R.I.B.A. NEW BUILDING FUND

List of Contributions Received or Promised

Brought forward	£12,433 6 3
Cecil Burns [*F.*]	5 0 0
W. E. Vernon Crompton [*F.*]	4 4 0
Robert E. Crossland [*A.*]	2 2 0
Essex, Cambridge and Hertfordshire Society of Architects	21 0 0
Percy Fanstone [*L.*]	1 1 0
John Gedge [*A.*]	1 1 0
S. H. Loweth [*F.*]	2 2 0
William Mills [*L.*]	1 1 0
Paul Phipps [*F.*]	5 0 0
Harold B. Smith [*A.*]	2 2 0
Tasmanian Institute of Architects	7 7 0
In addition, the following Allied Societies have made further contributions under the arrangement whereby for a limited number of years a percentage of the annual contributions paid by the R.I.B.A. to the Societies in respect of the R.I.B.A. members thereof will be credited to the Fund.	
Birmingham and Five Counties Architectural Association	20 3 10
Glasgow Institute of Architects	17 12 10
Leicester and Leicestershire Society of Architects	10 1 7
Norfolk and Norwich Association of Architects	0 2 1
Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects	0 4 2
Northern Architectural Association	23 10 5
South-Eastern Society of Architects	83 5 0
Wessex Society of Architects	16 2 8
West Yorkshire Society of Architects	23 11 10
Total received or promised to 19 January, 1935	£12,677 19 8

CENTENARY CONGRATULATIONS

The Architectural Association School of Architecture,
34, 35 and 36 Bedford Square,
London, W.C.1.
22 November 1934.

To the President, R.I.B.A.,—

Dear President,

The Teaching Staff of the Architectural Association wish to take the opportunity afforded by the Centenary Celebrations to express to the Royal Institute its gratitude for the interest and support which the Institute has afforded to the architectural schools, and for the sense of encouragement which this

support conveys in the work of teaching undertaken by the staff at the Architectural Association School.

At the same time the staff of the school wishes to add its congratulations to the Institute on this important occasion, and congratulate the Institute on the beauty of its new headquarters building.—Yours sincerely, HOWARD ROBERTSON,
Director of Education.

THE INTERMEDIATE EXAMINATION

NOVEMBER 1934

The R.I.B.A. Intermediate Examination qualifying for election as Student R.I.B.A. was held in London, Belfast, Edinburgh, Hull, Manchester, Newcastle-upon-Tyne and Plymouth, from 9 to 15 November 1934.

Of the 191 candidates examined 69 passed and 122 were relegated. The successful candidates are as follows:—

Applegarth, Arnold.
Baker, John Henry.
Barley, Arthur Leslie Francis.
Barnes, William Edwin.
Barrett, William Horace.
Bateman, Thomas Robert
Bidwell, Hugh Dryden.
Bird, Kenneth John.
Bramley, Ambrose Roy.
Brocklesby, Richard Shearwood.
Burden, Stanley Ernest.
Cassidy, Wilfred Joseph.
Cooper, Robert Ernest Wood.
Crompton, Richard Harper.
Darlow, Henry Arthur Jack.
Davies, Norman Talbot.
Davison, John.
Deans, Ralph Willis.
Deas, John Henderson.
Dorey, Wilfrid Athelstan.
Drake, Jack William.
Findlater, George Robertson.
Flack, Arthur Walter.
Fountain, Edgar Walter.
Gasson, Arthur John.
Goodall, Ernest Roy.
Griffiths, Stanley Thomas.
Griggs, Cyril Percy.
Groves, (Miss) Mary Ross.
Harris, Eric Bright.
Hengist, Charles James Ambrose.
Heritage, George Henry Reginald
Horne, Robert.
Horsman, Reginald Alfred.
Hunt, Lionel Bernard.
Jepson, George William.
Keeling, John William.
Kilner, Denis Scott.
Kinghorn, Ernest.
Lyon, George William.
McArtney, John William.
Martin, David Griffiths.
Meilandt, Gascon Bagnall.
Milnes, Charles Brian Kendall.
Nettleton, Cyril Neville.
Paul, Isaac.
Pritchard, Cyril.
Ralph, Thomas Carlyle.
Reeves, Arthur George.
Richardson, Lawrence Irvine
Ross, Sydney George William.
Sawday, John Trevor
Shuard, George William.
Simmons, Sidney.
Skingsley, Eric Stanley.
Smyth, Leslie.
Solomon, Clarence.
Spare, Kenneth Arthur.
Spencer, Alfred Lloyd.
Surman, John Maxwell.
Taylor, Maurice Ewan.
Temple, Peter.
Thomas, Isaac Hopkin.
Vernon, Frank Carlyle.
Walker, Denis Vivian Campbell.
Ward, John Frank.
Winsor, Ronald Louis.
Wiseman, Reginald Hadley.
Wright, Sydney.

19 December 1934.

R.I.B.A. EXAMINATION PAPERS

The questions set at the Intermediate, Final and Special Final Examinations held in November and December 1934 have been published, and are on sale at the Royal Institute, price 1s. (exclusive of postage).

Allied Societies

MANCHESTER SOCIETY OF ARCHITECTS

ANNUAL DINNER

The Manchester Society of Architects held its Annual Dinner on Friday night, 21 December, at the Masonic Temple, Manchester. Mr. J. R. Adamson, the president, in the chair. The guest of the evening was Sir Giles Gilbert Scott, president of the Royal Institute of British Architects, and over 100 members and guests were present.

Proposing the toast of the Royal Institute the chairman said they all rejoiced in the fact that the Institute had completed the first hundred years of its history and like some great galleon had now set out full sail under the happiest auguries into the second century of its career. The year now closing had seen the completion of the Institute's fine new headquarters which were inaugurated by the King. The Prince of Wales had graced its centenary celebrations, and they were glad to know that the honour of Knighthood had been bestowed upon its secretary. These facts, he thought, could be regarded as a fine tribute to the work of the Institute during its history of a hundred years. In the new chapter of its history which had just opened it would have many problems to deal with in connection with housing, town planning, the better development of the countryside, and the better use of new materials. There was also the problem of guiding the public taste so that there might grow up an increasing recognition of the importance in building.

Sir Giles Scott, responding to the toast, said he had been proud to be president of the Institute during this most eventful year of its history. During his term of office he had tried to do two things. One of these was to increase the public interest in architecture and the other was to cultivate a spirit of friendliness and co-operation between the Royal Institute and its allied societies throughout the Empire. Looking to the future he thought the prospects for architecture and the architect's profession were good. Not many years ago it was rare to find the Press taking any serious notice of architecture. Things were different in that respect to-day. They were really forcing architecture to the front and making the public realise that there was something more in architecture than the mere æsthetic interest of a rather exotic body of people who were known as architects. The public was realising that there were other values in life besides material values, and that in building it was not sufficient merely to provide a roof that would keep the rain out, to ensure that the drainage was good and the hot water supply satisfactory, and so on, but that something was lacking if the whole character and atmosphere of a building were not taken into consideration. It was an achievement to have got the public to realise that we did not live by bread alone and that æsthetic values were important. That being so, he believed that a great future lay before the architect's profession and he was quite sure that the Institute and its allied societies would continue to do all in their power to bring home to the public the importance of these other aims of architecture.

Mr. W. A. Johnson, junior vice-president of the Manchester Society of Architects, proposed the toast of the City of Manchester. Manchester, he said, had many things of which to be proud. It had fine achievements to its credit, and its courage in adversity had been high and was unabated. But like other cities which grew rapidly during the industrial revolution it was cluttered up with the débris of an era that was past. All cities needed a plan, and a plan implied order and coherence. It was part of the function of the architect to plan. Indeed, it had been said that the architect planned and built for eternity, and he supposed that it was only in eternity that the architect got his reward. One of the most significant developments of the past decade had been the rise of swift road transport; along with this had gone what was called ribbon development in the countryside with all its defects and dangers. These dangers were serious. The shopping streets of our cities should be streets of convenience and not

racing tracks. He would go further and suggest that the various interests of city life should be grouped each in its appropriate centre. Dealing with the question of smoke and soot, especially as it affected Manchester, he said it had been suggested that if all the soot that fell in Manchester in five years were swept into the Ship Canal the Ship Canal would be converted into the finest dirt track in the kingdom. Manchester, he suggested in conclusion, had achieved many things for which it deserved to be toasted, and for these things, and for the things that architects aspired that it should become, he had great pleasure in submitting the toast to them.

The Lord Mayor (Alderman S. Woollam), acknowledging the toast, said he had been tempted to think at first that the gentleman known as "the gloomy dean" had come to that dinner. Was the picture of Manchester which Mr. Johnson had painted altogether justified? Manchester had buildings of which any city might be proud, designed by Manchester architects. Speaking of the co-operation between the Manchester Corporation and the Civic Advisory Council the Lord Mayor said that he would like to pay his tribute to the architect members of that Council for the assistance they had given, and were always so ready to give, in the selection of plans and schemes of development that were put before them. It was a curious thing, however, that there had been more criticism of the design of a public house which the corporation proposed to build in the Lake District than of any other architectural project. He attributed this to the fact that the members of the profession had been in the habit of going to the Lake District to fish at Haweswater and staying at the Dun Bull, where they spent long nights with the local farmers as their guests at the revelry. The Advisory Council had been invited to consider the plans of the new Dun Bull and the Manchester Corporation, he thought, had nothing to fear. The corporation desired the help of the architects, believing it to be of the greatest value.

Mr. Alan E. L. Chorlton, M.P., responding to the toast of the guests, which was proposed by Mr. G. B. Howcroft, referred to the housing schemes of the post-war period which, he said, almost amounted to a rebuilding of Great Britain. There was controversy concerning the propriety of building flats for rehousing purposes on cleared areas. He did not want to appear to be taking sides in that controversy; at the same time he felt that slum clearance schemes did provide an opportunity for evolving something in the way of mass production that had never been seen before in order to bring down costs. He wondered if the City Fathers of Manchester had ever considered giving this job to engineers. It seemed to him that the job was really an engineering job. Expressing a doubt concerning the policy of building so many houses by municipal effort, Mr. Chorlton said he thought the way to abuse was opened if half the houses of the city were owned by the City Council. There were many people like himself who hoped that consideration would be given to the policy of doing more of this house building through the building societies.

THE BIRMINGHAM AND FIVE COUNTIES ARCHITECTURAL ASSOCIATION

The sixth meeting of the session was held on Friday, 4 January, in the Galleries of the Royal Birmingham Society of Artists, the chair being occupied by Mr. A. C. Bunch [*F.*], Vice-president.

The decease of Mr. A. L. Horsburgh [*F.*], who joined the Association in 1927, and of Mr. D. J. Butler, a Student Member, was announced, and it was resolved that the regrets of the Association should be entered upon the Minutes and a letter of condolence sent to their relatives.

The certificate of award of an R.I.B.A. Maintenance Scholarship of £100 per annum was presented by the chairman to Mr. Ronald William Higgs, of the Birmingham Architectural School.

A paper on "Architectural Lighting" was then read by Mr. R. O. Sutherland [*A.*], who pointed out that the difference between ordinary lighting and architectural lighting lay in the fact that in the latter great importance is paid to system, illumination features being placed in ordered design in order to produce lighting efficiency by architectural principles. This end is obtained by the utilisation, by light, of surfaces which become either luminous or illuminated, and are the intermediary between light and architecture. Architectural lighting thus possessed an impressionist value not always to be measured by its cost, and its proper application should receive the careful attention of the architect as soon as he began the design of any building in which he proposed to use it. For every type of building there is a correct manner of lighting, and all systems could not be applied indiscriminately since there would be a risk of using them in unsuitable settings.

In architectural lighting there are, the lecturer said, certain fundamentals of composition. There is, in the first place, the basic light, which is an over-all illumination suited for general purposes. Then there is the decorative light, where the illumination is depended upon to stimulate interest and add significance to a design. The vocational category includes purely utility light, where foot candles on the working plane is the major consideration. While fantasy refers to the designs in light produced for the purpose of entertainment, such as theatrical advertisement and atmospheric settings.

The lecturer illustrated his address by model demonstrations and a number of lantern slides.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

In the absence of Mr. Victor Bain, president, Mr. G. H. Foggitt took the chair at a meeting of the above Society held on January 17 at the Leeds College of Art, when a lecture on Art in Industry was given by Mr. H. B. Creswell, who said he regarded industry as a destroyer of art, for, directly the artist had an ulterior motive, a commercial motive, in the fashioning of his work, and pursued the public with salt to put on its tail, his work became of no account: he had sold his birthright and had committed the sin of subverting the pure aspirations of the human spirit to gross and material ends. This subversion was the chief concern of commercial aspirations. He was alluding to the whole field of endeavour formerly occupied by the craftsman who was essentially an artist. He was not speaking of the making of the machinery which enabled industry to flood the world with shoddy forgeries and substitutes for honest products, for to scamp the machinery would be to victimise the victimisers. A shoddy substitute for leather might be their aim, but a shoddy machine for making it was not wanted. Industry must have the most perfect machines for producing something that would produce larger profits. The ideal of industry was the destruction of the ideals of art; and the growth of industry was the precise measure of the decay of craftsmanship. There was no work of any sort done by a machine that could not be done better by hand. The methods, said the lecturer, employed by industry to force its products on society were characteristically dishonest, to the length of propping up its interests with shameless hypocrisy and falsities. Refined and effective lying was so important to industry that highly specialised experts named advertisement agents were called in whose chief business was skilful misrepresentation, and such were regarded as members of an honourable profession, together with their oral representatives, the salesmen, whose avowed triumph was to succeed in inducing people to buy things they did not want. This squalid game was now so highly successful that the adroit and overpowering salesman was spoken of as a national asset, when really he had no object in life but to do the public in the eye, serve himself and those who paid him. Mr. Creswell declared that the "Art in Industry" movement was nothing but a commercial stunt designed to baulk public esteem in the work of the individual craftsman by representing industry as covering the field of the arts and crafts, and so to advance its poisonous ranks by absorbing the artist and craftsman, and buttoning them in its pocket. The lecturer concluded with an appeal to his hearers to learn to be observers of life rather than mere participators in it, and particularly in their professional activities to employ the individual craftsman, and turn their backs on the canvassers and touts of the industrial exploiters who were driving him out of existence and degrading his art to satisfy the low ambitions of commercial opportunism.

Among those who took part in the discussion which followed were Messrs. G. H. Foggitt, R. Norval Paxton (Joint Hon. Secretary), R. A. Easdale, D. R. Andrews (Principal of the Leeds College of Art), J. S. Allen (Head of the Leeds School of Architecture), Allan Johnson and H. Antrum.

Membership Lists

APPLICATIONS FOR MEMBERSHIP
ELECTION 11 FEBRUARY 1935

In accordance with the terms of Bye-laws 10 and 11, an election of candidates for membership will take place at the Council Meeting to be held on Monday, 11 February 1935. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary R.I.B.A. not later than Tuesday, 5 February 1935.

AS FELLOWS (6)

McCONNEL: KENNETH HAMLYN [*A.* 1926], 70 King Street, Sydney, N.S.W.; 31 Wallaroy Road, Woollahra, N.S.W. Proposed by Professor Leslie Wilkinson, Professor Alfred S. Hook, and applying for nomination by the Council under the provisions of Bye-law 3 (d).

STEDMAN: WILLIAM BERNARD, D.C.M. [*A.* 1912], 38 Bedford Place, W.C.1; 38 Culmington Road, Ealing, W. Proposed by J. M. Sheppard, H. P. G. Maule and J. Hubert Worthington.

And the following Licentiates who have passed the qualifying Examination:—

JONES: RHYS, County Architect's Office, Llandyssul; "Penlone," Saron, Llandyssul. Proposed by F. C. R. Palmer, W. F. C. Holden and Henry A. Ellis.

MORGAN: EVAN, Town Hall, Ealing, W.5; 31A Gordon Road, Ealing, W.5. Proposed by J. J. Joass, Ernest G. Cole and T. S. Tait.

PEDLEY: ERNEST WILLIAM, 23 St. James's Street, Derby; "Maison Croft," Chestnut Avenue, Mickleover, Derby. Proposed by T. H. Thorpe, George M. Eaton and C. H. Aslin.

THOMAS: ROBIN AUDREY, 8 Havant Road, Cosham, Portsmouth; 2 Serpentine Road, Southsea, Portsmouth. Proposed by A. Leonard Roberts, Lt.-Col. R. F. Gutteridge and Norman Atkins.

AS ASSOCIATES (11)

ABBOTT: HARRY VICTOR [Passed five years' course at the Architectural Association. Exempted from Final Examination], 75 Chinbrook Road, Lee, S.E.12. Proposed by Howard Robertson, Sir Charles A. Nicholson and J. Murray Easton.

CASTLE: HUBERT HENRY [Passed five years' course at the School of Architecture, Leeds College of Art. Exempted from Final Examination], Lynthorpe, North Croft Grove, Ilkley, Yorkshire. Proposed by F. L. Charlton, B. R. Gribbon and G. H. Foggitt.

COPNALL: STEPHEN LEWIS WYNNE [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], Overpool, Little Sutton, Wirral, Cheshire. Proposed by Professor Lionel B. Budden, Professor Patrick Abercrombie and J. E. Marshall.

CUMMINGS: KENNETH [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], 6 Furness Park Road, Barrow-in-Furness. Proposed by Professor C. H. Reilly, Darcy Braddell and Professor Lionel B. Budden.

DUNCAN: JOHN FLETT [Passed five years' course at the School of Architecture, Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination], 53 West Church Street, Buckie, Banffshire. Proposed by R. Leslie Rollo, J. A. O. Allan and John G. Marr.

HALKERSTON: WILLIAM [Passed five years' course at the School of Architecture, Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination], 71 Fonthill Road, Aberdeen. Proposed by R. Leslie Rollo, T. Scott Sutherland and John G. Marr.

HILL: TREVOR [Passed five years' course at the Welsh School of Architecture, The Technical College, Cardiff. Exempted from Final Examination], 10 Bridge Street, Port Talbot, Glam. Proposed by W. S. Purchon, Harry Teather and Percy Thomas.

JOHNSON: FRANCIS FREDERICK [Passed five years' course at the School of Architecture, Leeds College of Art. Exempted from Final Examination], The Toft, High Street, Bridlington. Proposed by Victor Bain, Arthur Easton and Lt.-Col. C. D. Allderidge.

RENNIE: HUGH GRAHAM [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], 83 Stanhope Mews, E., South Kensington. Proposed by H. R. Goodrham, Christian Barman and Fred. G. Hicks.

TRUDE: JOHN GERARD [Passed qualifying Examination approved by the Board of Architectural Education of the Royal Australian Institute of Architects], c/o Messrs. Hennessy, Hennessy & Co. (Architects), 14 Martin Place, Sydney, N.S.W. Proposed by Professor Leslie Wilkinson, Professor Alfred S. Hook and Jas. R. F. Hennessy.

WOODHOUSE: WILFRID MEYNELL [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination], 19 Wigmore Street, Cavendish Square, W.1. Proposed by Theodore Fyfe, Edwin Williams and A. Trystan Edwards.

AS LICENTIATES (15)

BAILEY: ERIC NORMAN, Bridge Road, Maidenhead, Berks; The Knowle, Ray Park Avenue, Maidenhead. Proposed by J. Stanley Beard, W. E. Trent and G. Alan Fortescue.

BALDRY: WILLIAM CAPARNE, 6 Clarendon Street, Nottingham; 12 Colville Street, Nottingham. Proposed by Alfred J. Thraves and the President and Hon. Secretary of the Nottingham, Derby and Lincoln Architectural Society under the provisions of Bye-law 3 (a).

BARNETT: HAROLD SAMSON, The Shanghai Land Investment Co., 100 Jinkee Road, Shanghai, China; Flat 1B, No. 1191, Bubbling Well Road, Shanghai. Proposed by Bright Fraser, C. G. Butler and J. M. Venters.

BOWN: HAROLD LINLEY, 8 Victoria Avenue, Harrogate; Grain Beck, Killinghall, Harrogate. Proposed by Frank Tranmer, Victor Bain and B. R. Gribbon.

CLARK: JOHN THOMAS INCE, Eldon Chambers, Wheeler Gate, Nottingham; 72 Addison Street, Nottingham. Proposed by John Woollatt, Charles H. Calvert and H. Alderman Dickman.

CROWFOOT: LEONARD, Newmarket. Proposed by E. Thos. Johns, George J. Skipper and William Henry Mitchell.

FOSTER: CAPTAIN FRANCIS HAROLD, 11 Pelham Place, Seaford, Sussex; Bramble Furlonge, Downsview Road, Seaford. Proposed by W. T. B. Foster and the President and Hon. Secretary of the South-Eastern Society of Architects under the provisions of Bye-law 3 (a).

FOULKES-JONES: ANEURIN, "Tan-y-gader House," Dolgelley, Merioneth. Applying for nomination by the Council under the provisions of Bye-law 3 (d).

NUNN: THOMAS HARRY, c/o Cecil Masey, Esq., 15 Caroline Street, Bedford Square, W.C.1; 33 Selwyn Crescent, Welling, Kent. Proposed by Cecil Masey, John P. Briggs and Hugh Macintosh.

ROBSON: GEORGE, 181 Folkestone Road, Dover. Proposed by Ingalton Sanders and applying for nomination by the Council under the provisions of Bye-law 3 (d).

SENIOR: JOHN ANDREW, C.R.E.'s Office, Catterick Camp, Yorks; 12 Church Street, Hesleden, West Hartlepool, Co. Durham. Proposed by Geo. J. Bell and the President and Hon. Secretary of the Northern Architectural Association under the provisions of Bye-law 3 (a).

WAREFORD: HENRY ALLEN, 184 Clapham Road, S.W.9; 2 Hilldown Road, Streatham, S.W.16. Proposed by Henry A. Douglass, P. Ion Elton and Richard B. Ling.

WILLIAMS: ARTHUR EDGAR, Architectural Assistant, Engineer's Dept., Town Hall, Ilford, Essex; 46 Well Wood Road, Goodmayes, Essex. Proposed by J. Bruce Merson, H. Colbeck and Edward Meredith.

WOODS: WILLIAM JAMES, c/o Messrs. Rees & Holt, 64 Rodney Street, Liverpool, 1; 56 Makin Street, Liverpool, 4. Proposed by Wm. P. Horsburgh, T. Taliesin Rees and O. D. Black.

ZWINGER: LIONEL GORDON, Housing Department, Borough Engineer and Surveyor's Department, Town Hall, Wallasey, Cheshire; "Cotswold," 175 Seabank Road, Wallasey. Proposed by W. B. Allison, Harold E. Davies and Professor Lionel B. Budden.

ELECTION OF MEMBERS

In accordance with the terms of Bye-laws 10 and 11 the following candidates for membership were elected at the Council Meeting held on Monday, 14 January 1935.

AS HON. ASSOCIATES (3)

CASSON: STANLEY, M.A., F.S.A., Oxford.

HUSSEY: CHRISTOPHER EDWARD CLIVE.

TRISTRAM: ERNEST WILLIAM, Hon. D.Litt. (Oxon), A.R.C.A.

AS FELLOWS (9)

BAX: EDWIN GEORGE GOODSON [*A.* 1905].

BHEDWAR: CAVASJI KAIKHUSHRU [*A.* 1924], Bombay.

CHILTON: ERNEST ALFRED, F.S.I. [*A.* 1925.], Uckfield.

CRABB: HENRY RALPH, M.Inst.C.E., F.S.I. [*A.* 1908], Enfield.

GREIG: BAXTER [*A.* 1902].

HARTLEY: WILLIAM DAVID [*A.* 1928], Slough.

PASHEN: JOHN HERBERT, F.S.I., A.M.T.P.I., F.R.S.A. [*A.* 1926], Dar-es-Salaam, East Africa.

TRENT: WILLIAM SYDNEY [*A.* 1926].

and the following Licentiate who is qualified under Section iv Clause 4, (c) (ii) of the Supplemental Charter of 1925:—

HEWLITT: ARTHUR GEORGE, Hongkong.

AS ASSOCIATES (29)

BALSTONE: Miss JOYCE M. L. [Passed five years' course at the Architectural Association. Exempted from Final Examination], Bournemouth.

BANKS: ROBERT LOUIS [Passed five years' course at the Architectural Association. Exempted from Final Examination], Rickmansworth.

BIRD: GERALD PELHAM [Passed five years' course at the Architectural Association. Exempted from Final Examination], Basingstoke.

CAMPBELL: JOHN [Passed five years' course at the Glasgow School of Architecture. Exempted from Final Examination], Glasgow.

CARDEN: ANDREW [Passed five years' course at the Architectural Association. Exempted from Final Examination].

DEWING: FRANK MARTIN [Final], Norwich.

DUGGAN: DANIEL MICHAEL [Passed five years' course at the Architectural Association. Exempted from Final Examination], Buenos Aires.

DUKE-WOOLEY: HILARY BEECHAM DUKE [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination].

DUNCAN: ALEXANDER [Passed five years' course at the School of Architecture, Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination].

FINCH: RICHARD HENRY CAREW [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination].

FLEMING: LEONARD HUXLEY, A.A. Dip. [Passed five years' course at the Architectural Association. Exempted from Final Examination], Johannesburg.

GEDDES: WILLIAM JAMES [Passed five years' course at the School of Architecture, Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination], Buckie, Banffshire.

GODDARD: THEODORE DAVID [Passed five years' course at the Architectural Association. Exempted from Final Examination].

HEATH: WALTER FRANCIS GERARD [Passed five years' course at the Bartlett School of Architecture, University of London. Exemptedfrom Final Examination].

JAMES: FRANK NORMAN [Passed five years' course at the Architectural Association. Exempted from Final Examination].

JOHNSTON: Miss MONA BLAIR MCGAREL [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination], Chobham, Surrey.

MARSTON: FRANK [Final], Chislehurst.

MOIRA: RICHARD EDWARD [Passed five years' course at the Architectural Association. Exempted from Final Examination].

OHLSSON: RAE FULLER [Passed the qualifying Examination approved by the Board of Architectural Education of the Institute of South African Architects], Cape Town.

PEAKE: CLIVE RICHARD WILLIAM [Passed five years' course at Armstrong College School of Architecture (University of Durham), Newcastle-on-Tyne. Exempted from Final Examination], Sunderland.

PETERS: BERNARD, Dip.Arch. [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], Liverpool.

REEKIE: RONALD FRASER [Passed five years' course at the School of Architecture, Leeds College of Art. Exempted from Final Examination].

RICHARDSON: JOHN CLIFFORD [Passed five years' course at the School of Architecture, Victoria University, Manchester. Exempted from Final Examination], Manchester.

TAYLOR: ALFRED KENNETH [Passed five years' course at the Department of Architecture, University of Sheffield. Exempted from Final Examination], Sheffield.

TAYLOR: CYRIL MAXWELL, B.Arch. [Passed five years' course at the School of Architecture, McGill University, Montreal. Exempted from Final Examination], Brockville, Ontario.

THOMSON: WILLIAM INNES [Passed five years' course at the School of Architecture, Edinburgh College of Art. Exempted from Final Examination], Barnton, Midlothian.

VARCOE: ALEXANDER WENTWORTH [Passed five years' course at the School of Architecture, Edinburgh College of Art. Exempted from Final Examination], Joppa, Midlothian.

WATSON: ADAM [Final], Glasgow.

WILLIAMS: CENYDD WADE [Final], Edgware.

AS LICENTIATE (1)

SAYER: THOMAS FRANCIS, Eastbourne.

R.I.B.A. PROBATIONERS

During the month of December 1934 the following were registered as Probationers of the Royal Institute:—

BATES: ERIC ALBERT, 316 Dudley Road, Birmingham, 18.

BEARDSHAW: JOHN EDWARD, "Oriel Lodge," Robertson Road, Buxton, Derbys.

BENNETT: JOHN FREDERICK, 45 Essex Road, Gravesend, Kent.

BIGGIN-POUND: WILLIAM JACK, 62 St. Michael's Road, Yeovil.

BLOXHAM: JOHN, 22 Baxtergate, Doncaster, Yorks.

BOUTELL: LEONARD JOHNATHAN, 14 Foster Road, Parkeston, Nr. Harwich, Essex.

BOWMAN: JOHN, 3 Brewerton Road, Oldham, Lancs.

CARR: HEDLEY NORMAN, c/o Union Bank of Australia, 71 Cornhill, E.C.3.

CHEYNE: JOHN ROSS, 17 St. John's Road, Bucksburn, Aberdeen.

DIXON: JOHN JAMES SCOTT, Glendale, Mitford Road, Morpeth, Northumberland.

DRYDEN: JOHN WILLIAM, 12 Thistlebarrow Road, Bournemouth.

EVANS: WILLIAM DAVID, 5 Argyle Avenue, Gorseinon, Swansea.

EVERETT: ALAN GEORGE, 179 Priory Road, Hornsey, N.8.

FINCH: JAMES THOMAS, 42 Dollis Hill Avenue, Cricklewood, N.W.2.

FORBES: JOHN MACK, 64 Ightenhill, Park Lane, Burnley.

GARTON: ARTHUR ERNEST JAMES, 97 St. George's Road, S.W.1.

GORHAM: JOAN CECILIA, Avonside, Limpley-Stoke, Nr. Bath.

GRIERSON: COLIN, Hamilton, Staunton Road, Headington, Oxford.

GRIFFIN: JOHN OSWALD, 41B Queen's Avenue, Muswell Hill, N.10.

HARGREAVES: HARRY, 433 Whalley New Road, Blackburn, Lancs.

HARRISON: MICHAEL CHARLES, 117 Tennyson Road, Luton, Beds.

HITCHON: EDWARD, 146 Duke Street, Southport, Lancs.

HORN: RAYMOND ARTHUR, "Lyndene," Wisbech Road, King's Lynn, Norfolk.

HUDSON: CHARLIE LAWRENCE, Station House, Copmanthorpe, York.

JEWITT: STEPHEN PAUL, 54 Temple Fortune Lane, Golders Green, N.W.11.
JOLLY: ERNEST WILLIAM, 26 Corie Road, Norwich, Norfolk.
JONES: THOMAS MALDWYN, 45 Norwood Road, Stretford.
JONES: YVONNE MIRCILLE YARROW, 54 St. Charles' Square, N. Kensington, W.10.
KAN: FOON YUNG, 72 Gower Street, W.C.1.
KEY: FREDERICK ALLEN, 10 Errington Road, Colchester.
LEWIS: JOHN ANTONY, 55 Stokewood Road, Bournemouth.
LOASBY: ERIC, 88 Pytchley Road, Kettering, Northants.
LOMAS: CHARLES ANTHONY, 45 East Dean Road, Eastbourne, Sussex.
LONEY: WILLIAM PETER, 42 Woodfield Crescent, Ealing, W.5.
MCANALLY: JOHN JAMES, 4 Ascog Street, Crosshill, Glasgow.
MEACHER: MICHAEL ERNEST, Corner End, Warren Road, Deganwy, N. Wales.
MORETON: JOHN LOFTUS, 12 Argyll Mansions, Kensington, W.14.
NOALL: NORMAN MCKIRDY, 153 Henniker Gardens, East Ham, E.6.
PARSONS: HOWARD CHRISTOPHER, The Mount, Yatton, Somerset.
PICKUP: GEOFFREY, 7 Braeside, Blackburn.
RILEY: HARRY STANLEY, 3 Gloucester Avenue, Levenshulme, Manchester.
RITCHIE: FRANK, 5 Osborne Terrace, Arbroath.
RUSACK: HELEN COWAN, 34 Westbourne Gardens, Folkestone.
SANDERS: WILLIAM HAMILTON, c/o Hunter, 25 Napiershall Street, Glasgow.
SMITH: JOHN, 19 Spring Lane, Radcliffe, Manchester.
SMITH: ROGER GORDON, "Burnside," 45 Queen's Parks Drive, Bournemouth.
STREATHER: WILLIAM GODFREY, Kathrey Cottage, Moor Hall Park, Sutton Coldfield.
TAIT: JOHN KENNETH, 7 Keith Terrace, Blackhall, Edinburgh, 4.
TATE: JOHN WHYSALL, Tate Buildings, Kingsway, East Kirkby, Notts.
TRUDE: JOHN GERARD, Springfield House, Springfield Avenue, Darlinghurst, Sydney, N.S.W., Australia.
VINE: SIDNEY FREDERIC, "Glenthorne," 28 Ersham Road, Hailsham, Sussex.
WAGG: DONALD, 136 Crow Lane East, Newton-le-Willows, Lancs.
WARD: ROBERT WAKERLEY, 19 Grafton Road, Handsworth, Birmingham, 21.
WATSON: KENNETH JAMES VICTOR, 1 Lancaster Road, Enfield, Middlesex.
WHITAKER: PETER HUME, The Woodlands, Dore, Nr. Sheffield, Derbyshire.
WHITEHEAD: HAROLD, Totties, Thongsbridge, Huddersfield.
WILLS: FRANCIS BRAIM, Narrow Coombe, Ilsington, Nr. Newton Abbot, Devon.
YOUNG: FRANK WILLIAM, 13 Handsworth Road, Tottenham, N.17.

ELECTION OF STUDENTS R.I.B.A.

The following were elected as Students R.I.B.A. at the meeting of the Council held on the 14 January 1935.

ABBOTT: VERNON RUECROFT, 22 Leslie Crescent, Gosforth, Newcastle-upon-Tyne, 3.
APPLEGARTH: ARNOLD, Station House, Seghill, Dudley, R.S.O, Northumberland.
BAKER: JOHN HENRY, Thong House, Nr. Gravesend, Kent.
BARLEY: ARTHUR LESLIE FRANCIS, "Beechwood," 9 Fermoy Road, Thorpe Bay, Southend-on-Sea.
BARNES: WILLIAM EDWIN, The Bungalow, Rashleigh Drive, Vange, Essex.
BARRETT: WILLIAM HORACE, 40 Dassett Road, W. Norwood, S.E.27.
BATEMAN: THOMAS ROBERT, Sherbourne House, Allesley, Nr. Coventry.
BICKERTON: FRED WOODHOUSE, Clarence Villa, Eaglescliffe S.O., Co. Durham.
BIDWELL: HUGH DRYDEN, "The Cottage," William Way, Letchworth.
BIRD: KENNETH JOHN, 45 Surrey Street, Norwich.
BRAMLEY: AMBROSE ROY, 13 Ardfern Avenue, Norbury, S.W.16.
BROCKLESBY: RICHARD SHEARWOOD, 267 Kingston Road, Merton, S.W.19.
BURDEN: STANLEY ERNEST, 145 Marlborough Road, Oxford.
CARR: HEDLEY NORMAN, c/o Union Bank of Australia, 71 Cornhill, London, E.C.3.
CASSIDY: WILFRID JOSEPH, Red House, Church Road, Urmston, Nr. Manchester.
CHIDLEY: LESLIE CLAUDE, 349 Green Lanes, Palmers Green, N.13.
COOPER: ROBERT ERNEST WOOD, 71 Parkhurst Road, Holloway, N.7.
DARLOW: HENRY ARTHUR JACK, 36 Leinster Square, London, W.2.
DAVIES: NORMAN TALBOT, Ranmore, Ewell, Epsom, Surrey.
DAVISON: JOHN, 87 Mount Road South, Sunderland.
DEANS, RALPH WILLIS, 84 Brecknock Road, London, N.7.
DEAS: JOHN HENDERSON, c/o 29 Chalk Hill Road, Norwich.
DOREY: WILFRID ATHELSTON, "Home Court," 24 Palace Road, London, S.W.2.
DRAKE: JACK WILLIAM, The Red House, Chesham Bois, Bucks.
FINDLATER: GEORGE ROBERTSON, 27 East Grange, Sunderland.
FLACK: ARTHUR WALTER, c/o E. J. Thomas, 30 Landport Terrace, Southsea, Hants.
FOUNTAIN: EDGAR WALTER, 92 Westcotes Drive, Leicester.
GASSON: ARTHUR JOHN, 42 Mays Hill Road, Shortlands, Kent.
GERRISH: HERBERT VICTOR, The Grove, Fishponds, Bristol.
GOODALL: ERNEST ROY, 28 Blakes Lane, New Malden, Surrey.
GRIFFITHS: STANLEY THOMAS, 12 Vicarage Terrace, St. Thomas, Swansea.
GRIGGS: CYRIL PERCY, 37 Warwick Road, Earls Court, S.W.
GROVES: (MISS) MARY ROSS, 45 Redston Road, Hornsey, N.8.
HALL: WILLIAM RODNEY, "Allanedge," Plane Tree Nest Lane, Halifax, Yorks.
HARRIS: ERIC BRIGHT, 15 Binley Road, Coventry.
HENGIST: CHARLES JAMES AMBROSE, 94 Orchard Way, Shirley, Croydon.
HERITAGE: GEORGE HENRY REGINALD, 13 Pages Lane, Muswell Hill, N.10.
HORSMAN: REGINALD ALFRED, 10 Maida Vale Terrace, Plymouth.
HUNT: LIONEL BERNARD, c/o "Ishmailia" Piggottshill Lane, Harpenden, Herts.
JEPSON: GEORGE WILLIAM, "Kersal," Grasmere Crescent, Bramhall, Cheshire.
KEELING: JOHN WILLIAM, 16 Waverley Street, Dudley, Worcs.
KILNER: DENIS SCOTT, 1 Craig-y-don, Earls Heaton, Dewsbury, Yorks.
KINGDON: WILLIAM, "Fern Mount," Clayton, Bradford, Yorks.
KINGHORN: ERNEST, 39 Malvern Street, Newcastle-on-Tyne.
LYON: GEORGE WILLIAM, "The Bungalow," Landress Lane, Beverley, E. Yorks.
MCARTNEY: JOHN WILLIAM, 43 Faraday Avenue, Sidcup, Kent.
MARTIN: DAVID GRIFFITHS, 20 Ashworth Road, London, W.9.
MEILANDT: GASCON BAGNALL, 12A Leinster Square, London, W.2.
MILNES: CHARLES BRIAN KENDALL, "Wayside," 45 Sutton Road, Bournemouth.
NEALON: KENNETH, 22 Coombe Road, Croydon.
NETTLETON: CYRIL NEVILLE, 2 Melrose Avenue, Linthorpe, Middlesbrough, N. Yorks.
PAUL: ISAAC, 4 Silverdale Road, Hove, Sussex.
RALPH: THOMAS CARLYLE, 30 Turner Road, Norwich.
REEVES: ARTHUR GEORGE, 17 North Road, Hayes End, Middlesex.
RICHARDSON: ALBERT EDMUND, 62 Brook Road, Newbury Park, Ilford, Essex.
RICHARDSON: LAWRENCE IRVINE, "Oakburn," Shadwell Lane, Moortown, Leeds.
SAWDAY: JOHN TREVOR, Evington House, Old Evington, Leicester.
SHUARD: GEORGE WILLIAM, 107 Queen's Gate, South Kensington, London, S.W.7.
SIMMONS: SIDNEY, 57 Constance Road, Sutton, Surrey.
SKINGSLEY: ERIC STANLEY, 10 Oakdene Drive, Tolworth Rise, Surbiton, Surrey.
SMITH: MAURICE WILLIAM, 22 Waverley Avenue, Wembley.
SMYTH: LESLIE, 18 May Street, Belfast.
SOLOMON: CLARANCE, 12 Brandon Grove, Newcastle-on-Tyne, 2.

SPARE: KENNETH ARTHUR, "Farleigh," 63 Sandy Lane South, Wallington, Surrey.
SPENCER: ALFRED LLOYD, Tunstall Park, Sunderland.
SURMAN: JOHN MAXWELL, 93 Howard Street, Iffley Road, Oxford.
TAYLOR: MAURICE EWAN, "Brookside," 59 Bare Lane, Bare, Lancaster.
TEMPLE: PETER, 418 Hornsey Road, London, N.19.
THOMAS: ISAAC HOPKIN, 47 Beversbrook Road, London, N.19.
THOMPSON: ROBERT GREY, 12 Brightman Road, North Shields.
TOOMER: JOHN EDWIN, "Midfields," Comeytrowe, Taunton, Somerset.
TRUDE: JOHN GERARD, Springfield House, Springfield Avenue, Darlinghurst, Sydney, N.S.W., Australia.
VERNON: FRANK CARLYLE, 49 Collingham Road, Leicester.
WALKER: DENIS VIVIAN CAMPBELL, c/o Olley and Hawkins, 5 Queen Street, Great Yarmouth.
WARD: JOHN FRANK, 21 Eglinton Road, Bow, E.3.
WINDLE: COLIN WILLIAM LEDGER, Banner Cross Hotel, Ecclesall Road, Sheffield, 11.
WINSOR: RONALD LOUIS, c/o E. J. Thomas, 30 Landport Terrace, Southsea.
WISEMAN: REGINALD HADLEY, Westbourne, Highcross, Lardhorn, Nr. Blackpool.
WRIGHT: SYDNEY, 23 Wesley Street, Waterloo, Liverpool.

Notices

THE FIFTH GENERAL MEETING, SESSION 1934-35, MONDAY 11 FEBRUARY 1935 AT 8 P.M.

The Fifth General Meeting of the Session 1934-35 will be held on Monday 11 February 1935 at 8 p.m. for the following purposes:—

To read the Minutes of the Fourth General Meeting held on Monday 28 January 1935;

Formally to admit members attending for the first time since their election;

Mr. Percy E. Thomas, O.B.E. [*F.*], to read a Paper on "The Planning of Municipal Buildings."

EXHIBITION OF PRIZE DRAWINGS

The Annual Exhibition of Designs and Drawings submitted for the Prizes and Studentships, 1935, will remain open in the Henry Florence Hall until 2 February, between the hours of 10 a.m. and 8 p.m., Saturday 10 a.m. and 5 p.m.

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the election to take place on 15 April 1935 they should send the necessary nomination forms to the Secretary R.I.B.A. not later than Saturday, 16 February 1935.

LICENTIATES AND THE FELLOWSHIP

The attention of Licentiates is called to the provisions of Section IV, Clause 4 (*b*) and (*cii*), of the Supplemental Charter of 1925. Licentiates who are eligible and desirous of transferring to the Fellowship can obtain full particulars on application to the Secretary R.I.B.A., stating the clause under which they propose to apply for nomination.

THE USE OF THE TITLES "CHARTERED ARCHITECT" AND "REGISTERED ARCHITECT"

Now that the Registration Act is in force, the Council have been asked to give advice with regard to the best way to use the title "Registered Architect" by members of the R.I.B.A. who have been placed on the Register, and who already have the right to use the designation "Chartered Architect."

The Council recommend that members of the R.I.B.A. who have been registered should use the designation "Chartered and Registered Architect."

THE NATIONAL ASSOCIATION OF WATER USERS

Members are reminded that the National Association of Water Users, on which the R.I.B.A. is represented, exists for the purpose of protecting the interests of consumers.

Members who experience difficulties with water companies, etc., in connection with fittings are recommended to seek the advice of the Association. The address of the Association is 46 Cannon Street, London, E.C.4.

NEW BUILDING MATERIALS AND PREPARATIONS

The Science Standing Committee wish to draw attention to the fact that information in the records of the Building Research Station, Garston, Watford, is freely available to any member of the architectural profession, and suggest that architects would be well advised, when considering the use of new materials and preparations of which they have had no previous experience, to apply to the Director for any information he can impart regarding their properties and application.

CESSATION OF MEMBERSHIP

Under the provisions of Bye-law 21, the following have ceased to be members of the R.I.B.A.:—

As FELLOWS

The Rev. Herbert Cooper Anderson.
Frank Clemes.
Charles Frederick Ward.

As ASSOCIATES

Sefton Stockford Careless.
John William Kay.
Paul William Mulready.
Maung Tun Sein.

As LICENTIATES

Donald John Cameron.
John Seys Evans.
Charles Ewan.
Robert Ewan.
Edgar Rees Griffiths.
Henry Lloyd Jones.
Frederick William Kinns.
Roland Look.
Captain George Melville McCorquodale.
Ernest Albert Newton.
Henry Paul.
William Henry David Richards.
John Edward Taylor.

DISCIPLINARY ACTION

Mr. Arthur Herbert Holmes of The Parade, South Benfleet, Essex, a Fellow, was by decree of the Council dated 14 January 1935 made pursuant to the Bye-laws expelled from membership of the Royal Institute and accordingly he ceased to be a member on that date.

Mr. Frank Goddard and Mr. Thomas Bertram Wain of Station Chambers, Coalville, near Leicester, Licentiates, were reprimanded by decree of the Council dated 14 January 1935 made pursuant to the Bye-laws.

Competitions

COMPETITION FOR DEVELOPMENT OF KING STREET HOUSING SITE, KIRKCALDY

The Competitions Committee desire to call the attention of members to the fact that the conditions of the above competition are not in accordance with the Regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime members should not take part in the competition.

BISHOPSGATE POLICE STATION AND HOSPITAL

The Corporation of the City of London are to hold a competition open to architects in the Metropolitan area for the rebuilding of the Police Station and Hospital at Bishopsgate. Premiums of £250, £150 and £50 will be offered. Mr. H. Austin Hall [*F.*] is the Assessor.

CROYDON: DEVELOPMENT SCHEME

The Corporation of Croydon are holding a competition for the lay-out and development of a site in the centre of the town.

Assessor: Mr. Thomas Adams, F.S.I., M.T.P.I. [*F.*].

Premiums: £500, and £350 to be divided between not more than three placed next in order of merit.

Last day for receiving designs: 30 April 1935.

Last day for questions: 31 January 1935.

Conditions may be obtained from the Town Clerk, Town Hall, Croydon. Deposit £1 1s.

GLOUCESTER: CEMETERY CHAPEL AND BUILDINGS

The Gloucester Corporation invite architects practising in the area of the Wessex Society of Architects to submit in competition designs for a cemetery chapel and auxiliary buildings at Coney Hill.

Assessor: Mr. Edward Maufe [*F.*].

Premiums: 125 and 100 guineas.

Last day for receiving designs: 27 March 1935.

HERTFORD: COUNTY COUNCIL NEW CENTRAL OFFICES

The Hertfordshire County Council are to hold a competition open to architects of British nationality for new Central Offices for the County Council at Leahoe, Hertford. Premiums of £350, £250 and £150 will be offered. Mr. Robert Atkinson [*F.*] is the Assessor.

WEST HUMBERSTONE, LEICESTER: BRANCH LIBRARY

The Corporation of the City of Leicester invite architects resident or practising within the City boundaries to submit in competition designs for a Branch Library to be erected at West Humberstone.

Assessor: Mr. H. A. Gold, M.C. [*F.*].

Premiums: £75, £50 and £25.

Last day for receiving designs: 28 February 1935.

Last day for questions: 14 December 1934.

CARPET DESIGN COMPETITION

The *Furnishing Trades' Organiser* is promoting a competition for designs for four types of carpet, with two prizes in each class of £3 and £2 10s. There is also a special prize of £2 10s. for the best design submitted by a student aged 18 or under. Students of recognised Schools of Art or Technology in the British Isles are eligible to compete. Full conditions of the competition are published in the *Furnishing Trades' Organiser* for January 1935. The closing date for entries is 30 March 1935.

EDINBURGH ARCHITECTURAL ASSOCIATION COMPETITION FOR HOUSE DESIGNS

The Edinburgh Architectural Association invite Fellows, Associates and Students of the Association to submit in competition designs for two types of houses, (*a*) one-storey and (*b*) two storeys. Prizes of £3 and £2 10s. are offered for each type. The Jury of Assessors will be nominated by the President of the Edinburgh A.A. The last day for receiving entries is Saturday, 2 February 1935.

Members' Column

SITUATION VACANT

ASSISTANT Architect, preference being given to candidates with accepted professional qualifications and an aptitude for architectural design. Salary £425 per annum. For forms of application apply enclosing stamped addressed foolscap envelope to Mr. F. Willey, F.R.I.B.A., 34 Old Elvet, Durham. Last day for receiving applications, 16 February 1935.

TRIP TO ASIA MINOR AND SYRIA

ARCHITECT considering exploring Asia Minor and Syria, probably with car, about April, would be glad to hear from another Architect to join and share expenses.—Box No. 7135, c/o Secretary R.I.B.A.

NEW PRACTICE

MR. J. H. HARGREAVES [*A.*] is now in practice at 104 London Street, Fleetwood, and will be pleased to receive trade catalogues, etc., at that address.

MR. THOMAS BURRINGTON, A.R.I.B.A., 150 Church Street, Kensington, W.8, has now removed his office to 25 High Street, Swindon, Wilts [Tel.: Swindon 850], and will be pleased to receive trade catalogues, etc., at that address.

MR. DAVID BEECHER has started in practice at 14 Park End Street, Oxford [Tel.: 3171], and will be pleased to receive trade catalogues and samples, etc.

MR. W. CLAUDE POPPLETON [*A.*] has taken over the practice of Mr. S. P. Fairhurst, architect, Oddfellows Hall Chambers, Mirfield, Yorks. The name of the firm is now Messrs. S. P. Fairhurst and Poppleton, A.R.I.B.A., of the same address, who will be pleased to receive trade literature, catalogues, etc.

PARTNERSHIPS WANTED

YOUNG Architect, A.R.I.B.A., University Lecturer, desires an architectural partnership in or near London.—Reply Box No. 1115, c/o Secretary R.I.B.A.

ASSOCIATE with large experience of public and private works is desirous of taking up a partnership in an established firm of architects, or of forming a firm on equal basis with another architect in a district where hard work would be likely to produce good results. Southern or South-eastern Counties preferred. Capital immediately available.—Box No. 1715, c/o Secretary R.I.B.A.

SHARE IN PARTNERSHIP FOR DISPOSAL

MEMBER wishes to dispose of half-share partnership in busy general office in west country city. £800 premium required.—Box No. 1915, c/o Secretary, R.I.B.A.

ALTERATION IN PARTNERSHIP

OWING to ill-health, Mr. F. Barry Peacock, of Messrs. Peacock and Bewlay, will be retiring on the 31st inst., and from that date Mr. Ernest C. Bewlay will take into partnership Mr. F. Wager and Mr. E. Berks Norris, chartered architects, who have been associated with the firm for many years. The firm will continue to practise in the same offices under the name of Peacock and Bewlay, to whom all communications should be addressed at 83 Colmore Row, Birmingham, 3.

PRACTICE FOR DISPOSAL

LONDON architect, retiring after more than 40 years' domestic and ecclesiastical practice, wishes to dispose of goodwill (five unfinished churches, etc.), and all drawings, documents, furniture and office equipment.—Box No. 2015, c/o Secretary R.I.B.A.

CLERK OF WORKS

THE recommendation of a really good Clerk of Works free in April for a two years' contract in Lancashire would be much appreciated by Alan E. Munby, 9 Old Square, Lincoln's Inn, W.C.

ROOM IN OFFICE TO LET

WESTMINSTER architect has small room, first floor, in his office available to let to another. Suitable to a beginner in practice who might require occasional guidance.—Apply Box No. 2115, c/o Secretary R.I.B.A.

SHARE IN OFFICE

A FELLOW with attractive ground floor office in the Bloomsbury district offers accommodation address and part use to another practitioner, including telephone, clerical services, etc.—Box 1215, c/o Secretary R.I.B.A.

OFFICE TO LET

THE office is on the third floor of No. 11 Upper Phillimore Gardens, W.8, and has just been completely redecorated and furnished with large plan-chest, tressel and stools, and excellent day and artificial lighting. Telephone, house telephone, electric fire, water, lavatory, typewriter, architect's reference books. Moderate rental. —Apply Box No. 2215, c/o Secretary R.I.B.A.

ROOM TO LET

ONE room, 18 ft. by 9 ft., to let in busy Architect's office, Victoria Street, with separate entrance and lift. Occasional employment for tenant might be arranged if desired. Telephone. Moderate rental, including light and cleaning.—BoxNo. 1411, c/o Secretary R.I.B.A.

TWO ROOMS REQUIRED

MEMBER requires two rooms in Strand or Holborn districts. Please state inclusive rent and rates, floor, and if lift, aspect, heating.—Box No. 1815, c/o Secretary R.I.B.A.

Minutes III

SESSION 1934-1935

At the Third General Meeting of the Session, 1934-1935, held on Monday, 14 January 1935, at 8 p.m.

Mr. John Begg, Vice-President, in the Chair.

The attendance book was signed by 22 Fellows (including 15 Members of Council), 41 Associates (including 2 Members of Council), 9 Licentiates (including 1 Member of Council), and a very large number of visitors.

The Minutes of the Second General Meeting held on 17 December 1934, having been published in the JOURNAL, were taken as read, confirmed and signed as correct.

The Hon. Secretary announced the decease of:—

Louis Harrison, elected Licentiate 1911, Fellow 1932.

Arthur Lindsay Horsburgh, elected an Associate 1918, Fellow 1929.

Frederick Charles Richard Palmer, elected Licentiate 1911, Fellow 1921.

Ellis Marsland, Retired Member of the Society of Architects since 1928. Mr. Marsland was Hon. Secretary of the late Society of Architects from 1893 to 1908, Hon. Auditor from 1909 to 1916 and Hon. Librarian in 1920. He was also awarded the Society's Gold Medal (Services).

Thomas Henry Bowel, transferred to Licentiateship 1925.

Harry Cheetham, elected a Licentiate 1910.

And it was Resolved that the regrets of the Institute for their loss be entered on the Minutes and that a message of sympathy and condolence be conveyed to their relatives.

The following members attending for the first time since election were formally admitted by the Chairman:—

ASSOCIATES

Douglas W. Dickenson.	Paul Pascoe.
Miss Carmen J. Dillon.	Cecil E. Reeve.
K. F. Farnfield.	E. R. Welstead.
H. J. Whitfield Lewis.	

LICENTIATES

John E. G. Green.	C. W. Venton.

STUDENTS

Joseph W. Murphy.	J. A. Rixon.
Kenneth M. Raw.	David Stamp.
Norman T. Rider.	R. A. Young.

The Chairman announced that the Council proposed to submit to His Majesty the King the name of Mr. W. M. Dudok, Hon. Corresponding Member (Holland), as a fit recipient of the Royal Gold Medal for 1935.

The Secretary having read the Deed of Award of Prizes and Studentships made by the Council under the Common Seal, the sealed envelopes bearing the mottoes of the successful competitors were opened and the names disclosed.

Mr. Edward Maufe, M.A., Oxon [*F.*], read a review of the works submitted for the Prizes and Studentships, 1935, and illustrated it by lantern slides.

On the motion of Mr. A. H. Moberly [*F.*], Chairman of the R.I.B.A. Board of Architectural Education, seconded by Mr. E. M. Rich, F.C.G.I., B.Sc., Education Officer of the London County Council, a vote of thanks was passed to Mr. E. Maufe by acclamation and was briefly responded to.

The proceedings closed at 9.35 p.m.

R.I.B.A. JOURNAL

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